Single Aisle
TECHNICAL TRAINING MANUAL
T1 (CFM 56) (Lvl 2&3)
AIRCRAFT GENERAL PRACTICES

This document must be used for training purposes only

Under no circumstances should this document be used as a reference

It will not be updated.

All rights reserved
No part of this manual may be reproduced in any form,
by photostat, microfilm, retrieval system, or any other means,
without the prior written permission of AIRBUS S.A.S.

AIRBUS Environmental Recommendation
Please consider your environmental responsability before printing this document.

AIRCRAFT GENERAL PRACTICES

06 DIMENSIONS AND AREAS

Structural Breakdown and Zoning (3) 2

07 JACKING

Jacking (2) 26

09 TOWING

Towing and Taxiing (2) 32

10 PARKING AND MOORING

Parking and Mooring (2) 42

12 SERVICING

Maintenance External Visit (3) 48

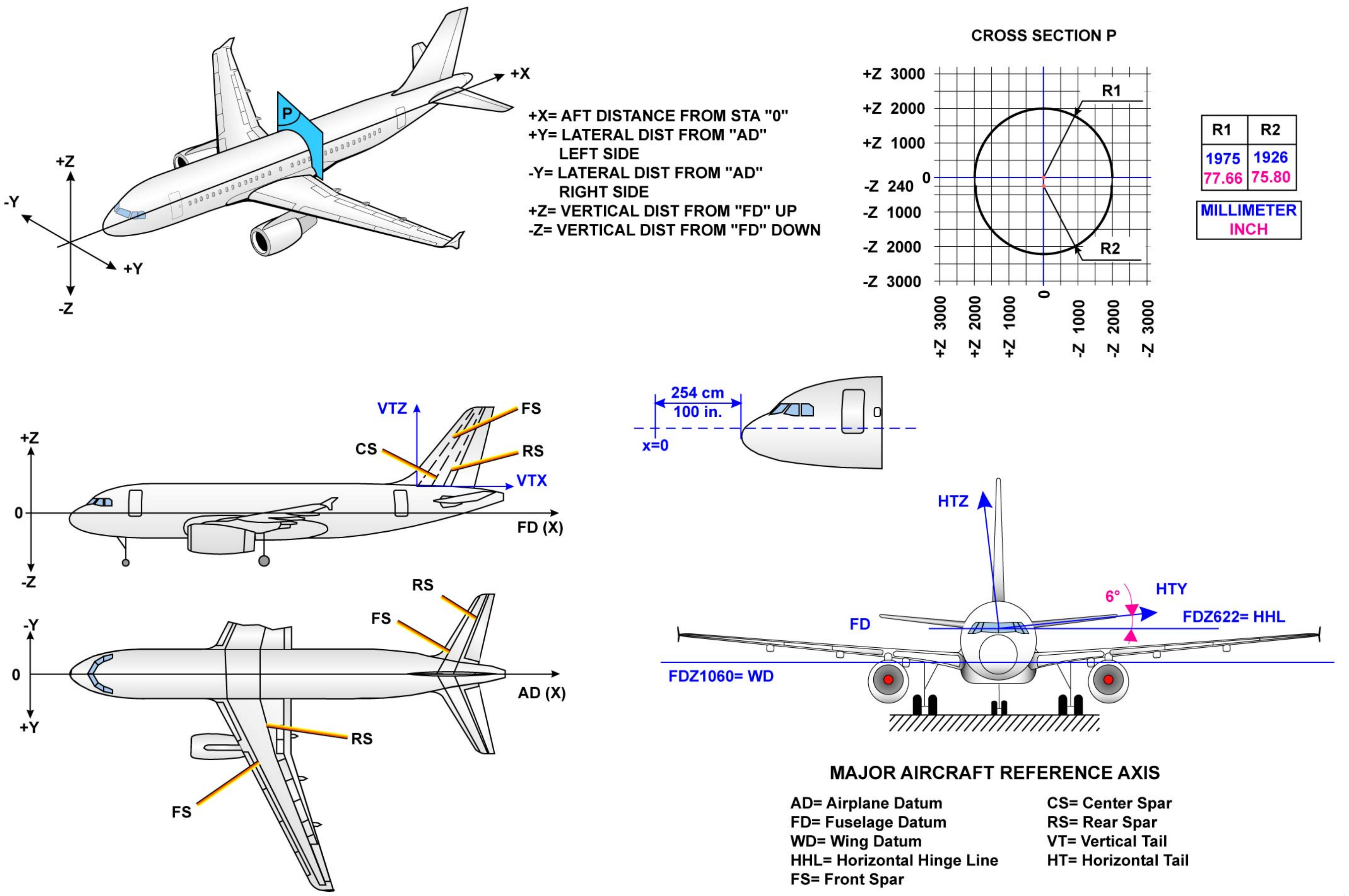
STRUCTURAL BREAKDOWN AND ZONING (3)

REFERENCE AXES

The structure elements are installed according to the following reference axes. The X axis in the longitudinal direction of the fuselage, the Y axis in the direction of the wing span and the Z axis in the vertical direction. The cross section P presents a typical fuselage section at frame 47.

NOTE: Note: The reference (station 0) for all structural measurements for the X axis is set at 100 in (254 cm) forward of the A/C nose.

U7Z08431 - U2XT1T0 - UM01D1000000001



REFERENCE AXES

U7Z08431 - U2XT1T0 - UM01D1000000001

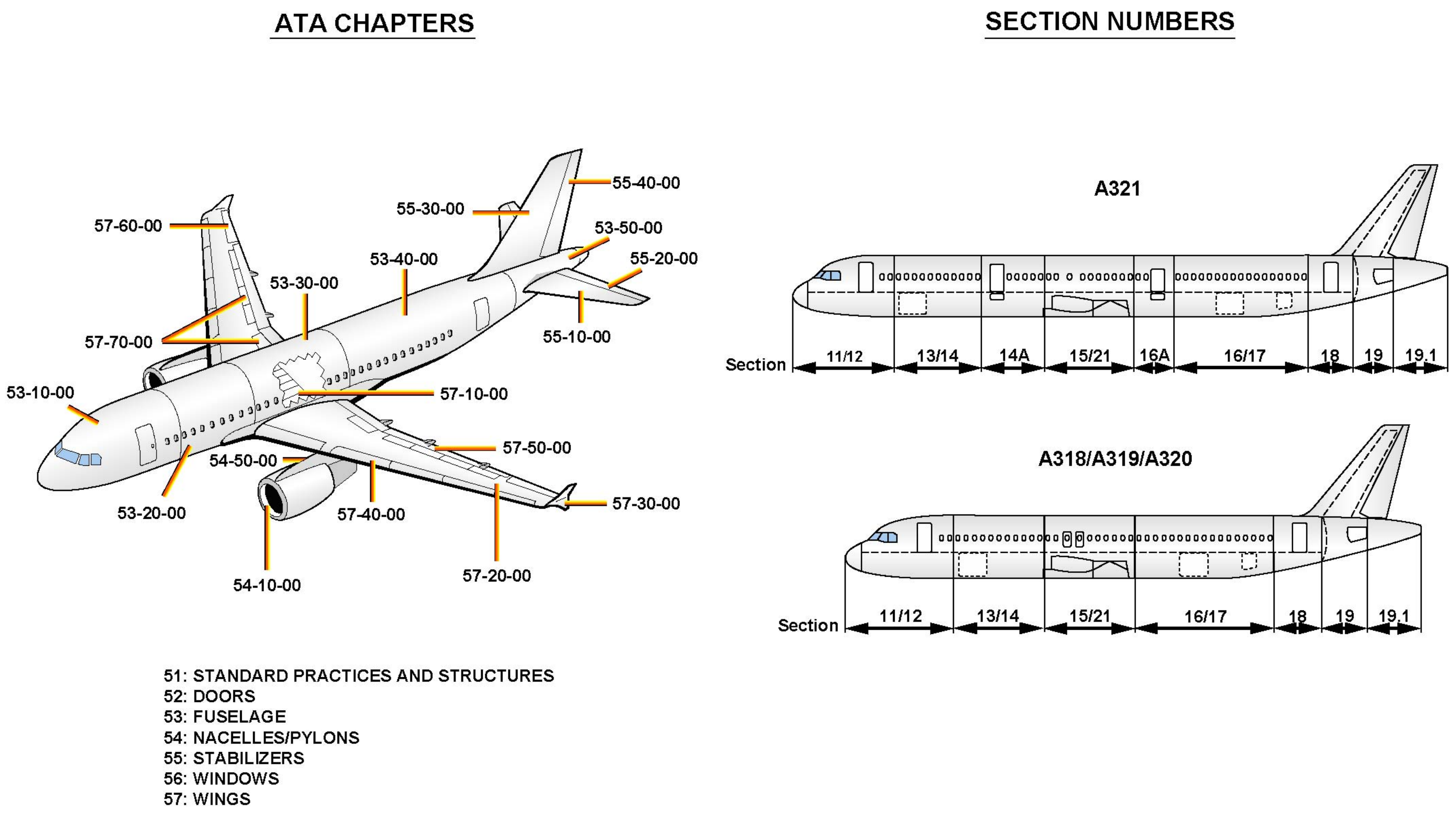
STRUCTURAL BREAKDOWN AND ZONING (3)

ATA CHAPTERS

The A/C structure is divided according to the ATA 100 specifications.

SECTION NUMBERS

Each major part of the A/C receives a section number. The fuselage section base number is 10. The fuselage is divided into various sections for manufacturing reasons.



ATA CHAPTERS & SECTION NUMBERS

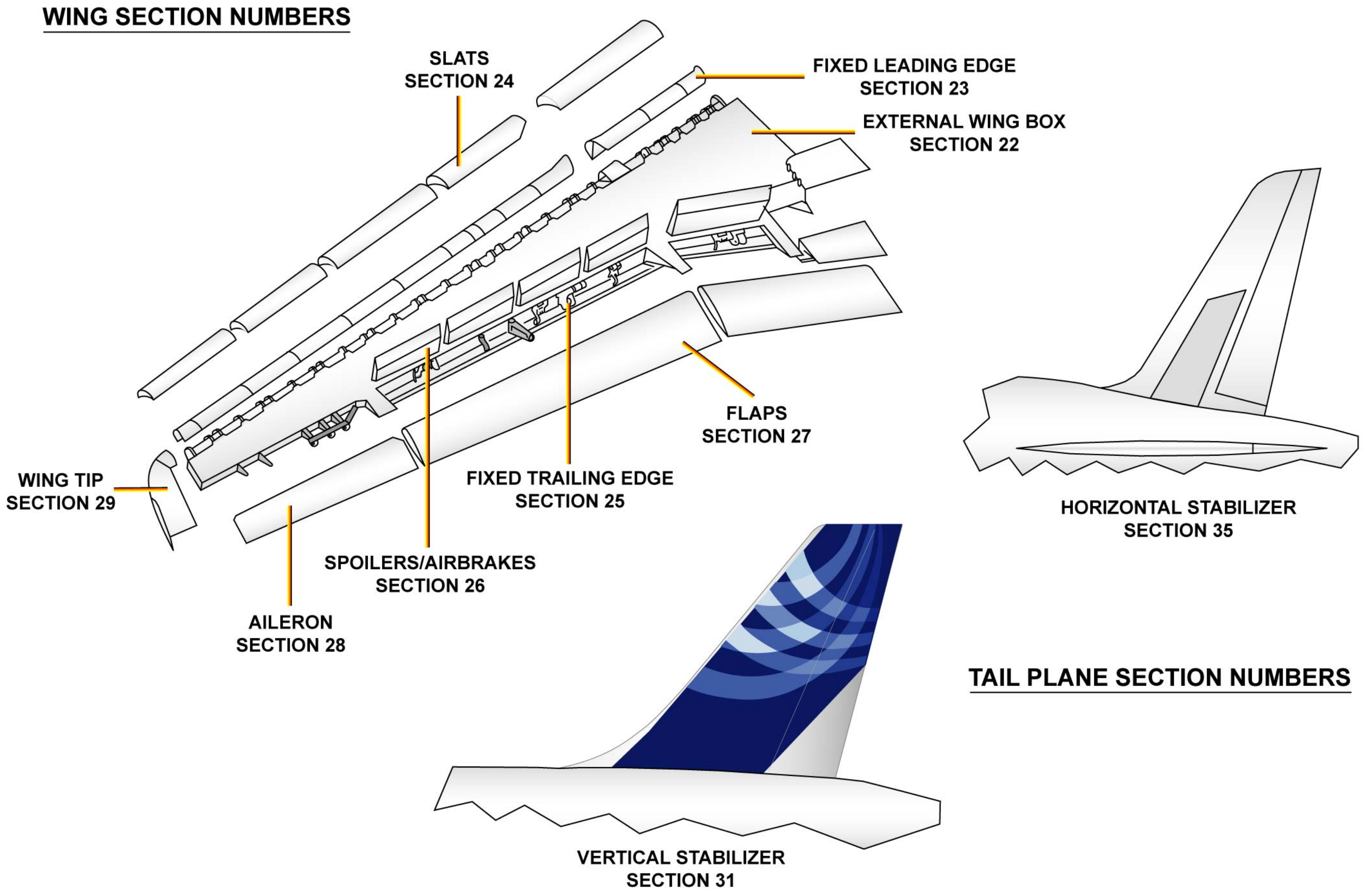
U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

SECTION NUMBERS (continued)

WING AND TAIL PLANE

The general wing section base number is 20. The general tail plane section base number is 30.



SECTION NUMBERS - WING AND TAIL PLANE

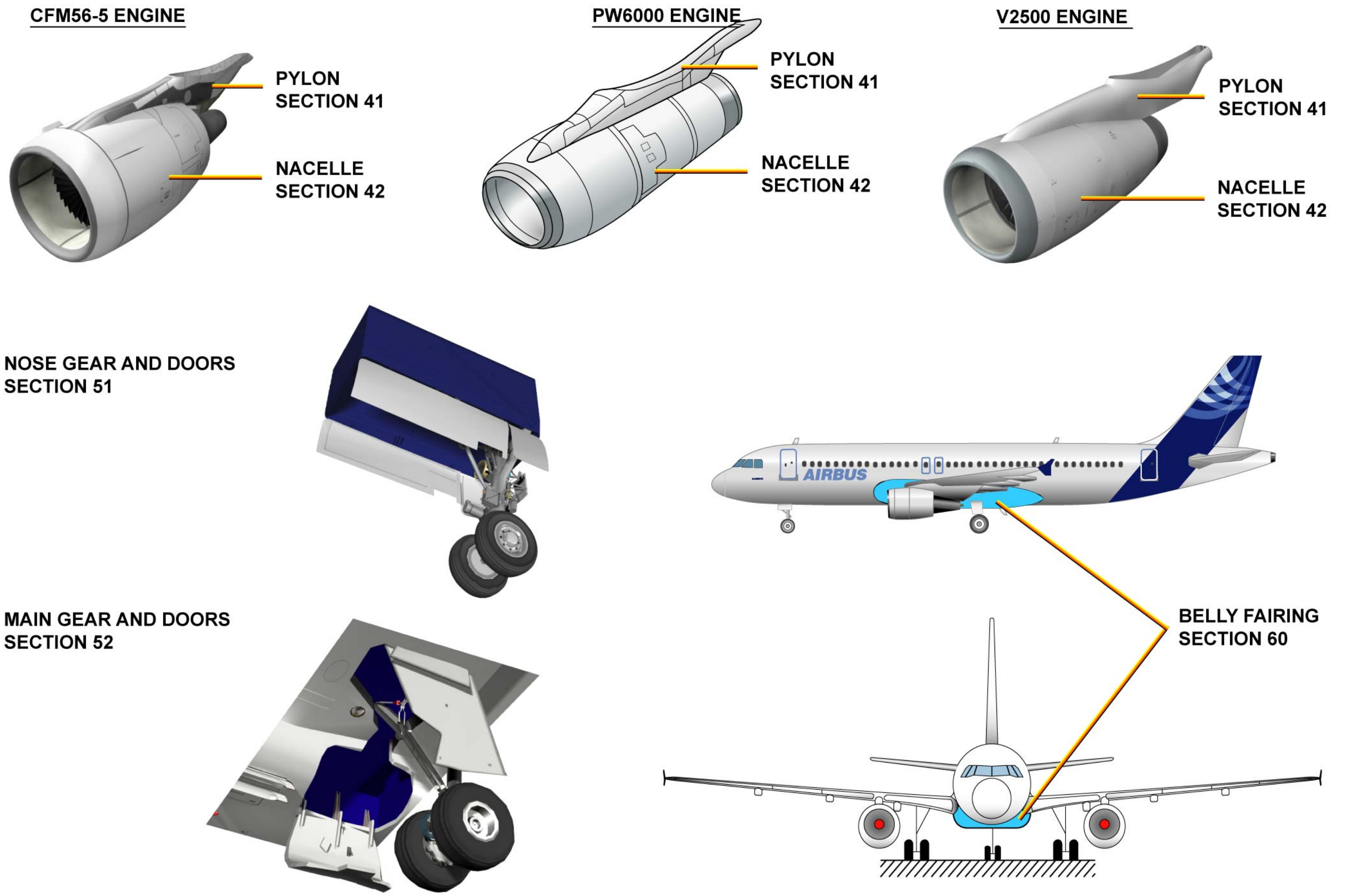
U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

SECTION NUMBERS (continued)

ENGINE, LANDING GEAR AND BELLY FAIRING

The engine section base number is 40. The L/G section base number is 50. The general belly fairing section base number is 60.



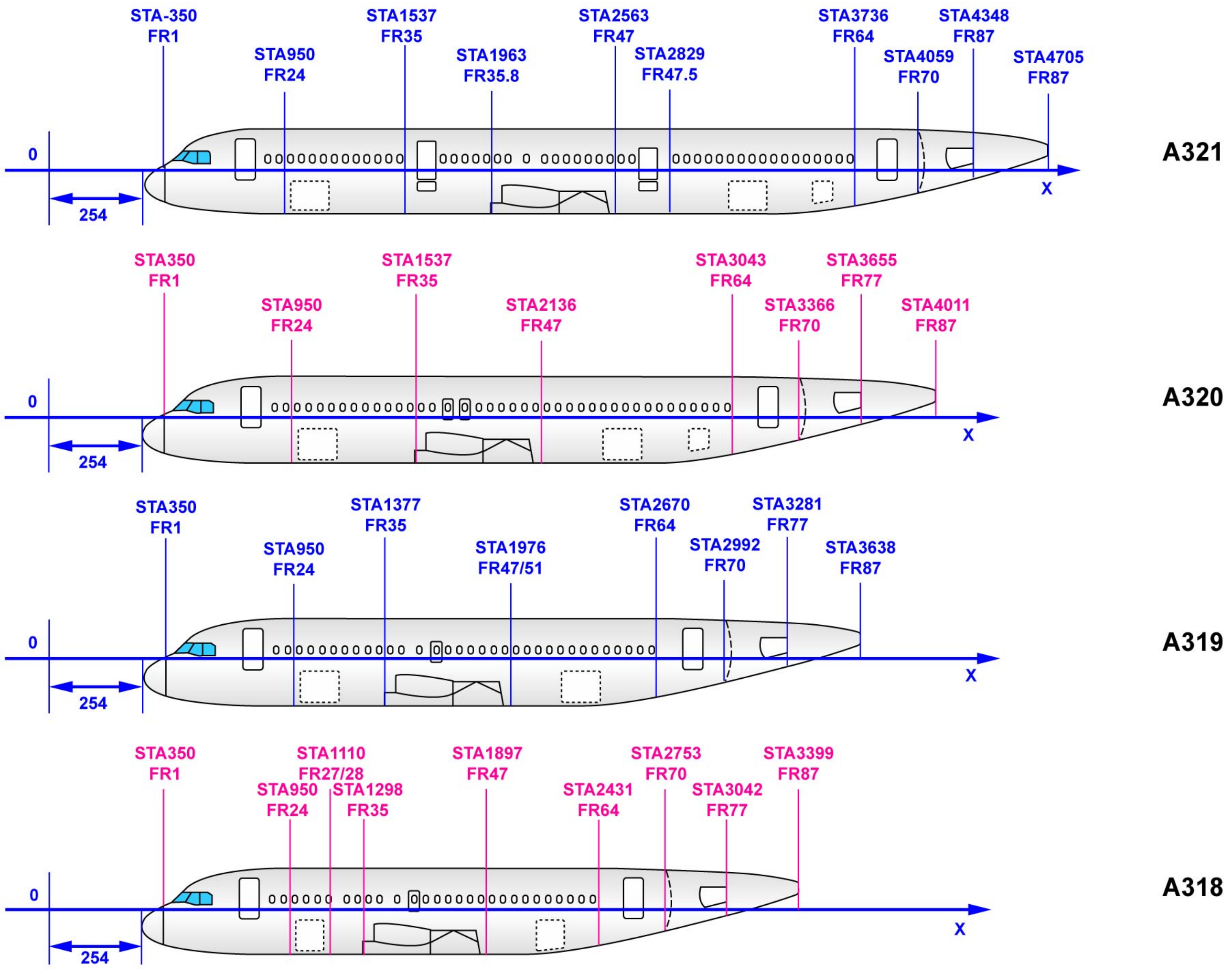
SECTION NUMBERS - ENGINE, LANDING GEAR AND BELLY FAIRING

STRUCTURAL BREAKDOWN AND ZONING (3)

STATION NUMBERS

FUSELAGE

The STAtion number is the distance in centimeters of a cross-section from a reference point. The station/frame numbers shown agree with the section boundaries.



STATION NUMBERS - FUSELAGE

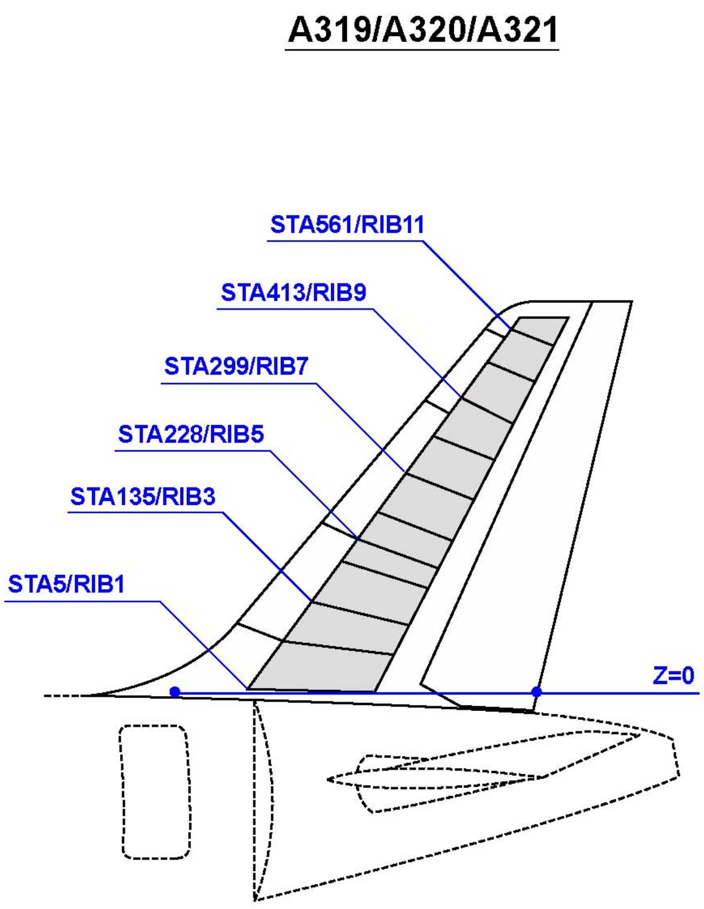
U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

STATION NUMBERS (continued)

VERTICAL STABILIZER

For the vertical stabilizer the reference station is Z=0 at the vertical Z-axis. Due to the fin tip extension, the A318 station numbers have changed. The new additional rib 12N is on the STA597.



STATION NUMBERS - VERTICAL STABILIZER

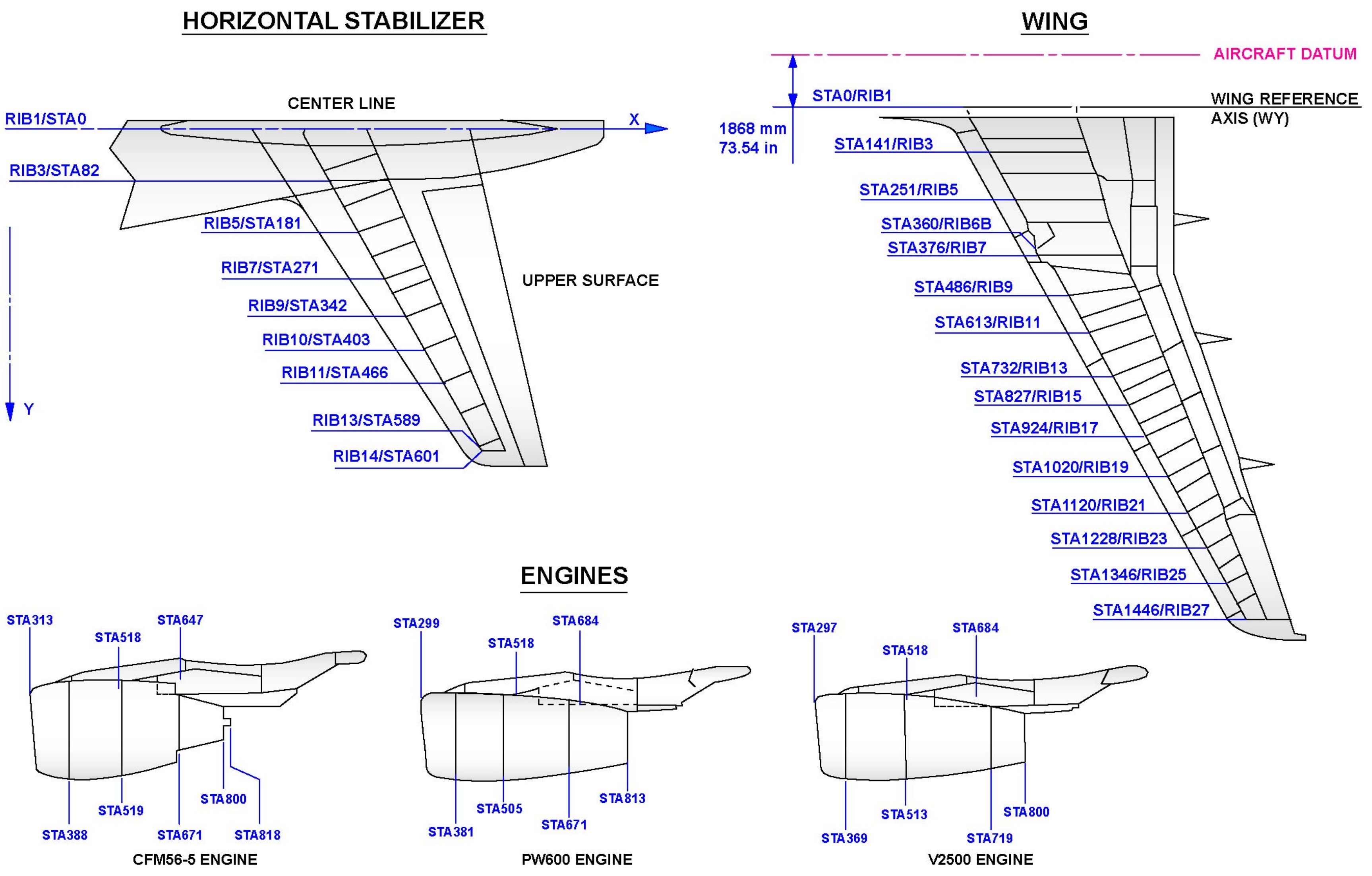
U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

STATION NUMBERS (continued)

HORIZONTAL STABILIZER, ENGINE AND WING

For the horizontal stabilizer the reference station is y=0 at the A/C Y axis. For the wings, the reference station is the wing reference axis (WY). WY is located at 1868 mm (73.54 in) from the A/C X axis. For the engines, station numbers are different depending on the version.



STATION NUMBERS - HORIZONTAL STABILIZER, ENGINE AND WING

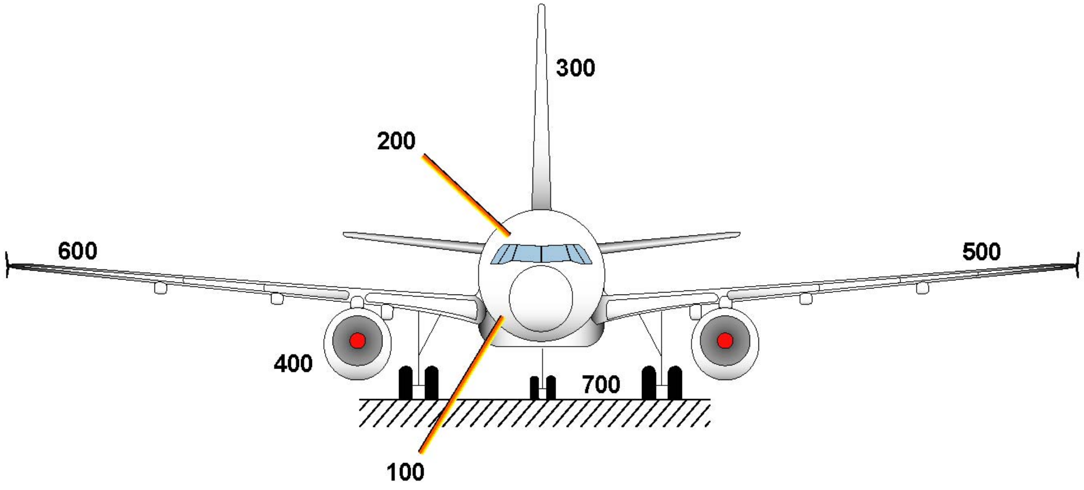
U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

ZONES NUMBERS

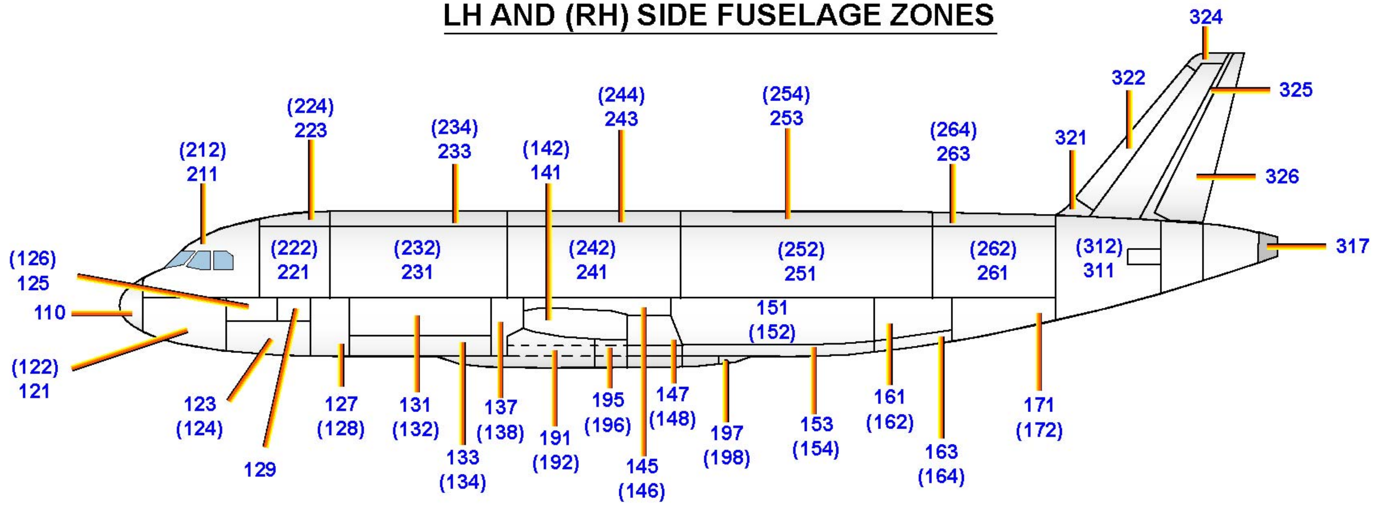
There are 8 major zones for the A/C. Each major zone is identified by the first digit of a three digits number. The even numbers identify the zones on the RH side of the A/C, while odd numbers identify the zones on the LH side of the A/C. The sub-zone 320 identifies the vertical stabilizer.

MAJOR ZONES



100 TO 199: LOWER HALF FUSELAGE
200 TO 299: UPPER HALF FUSELAGE
300 TO 399: STABILIZERS AND FUSELAGE TAIL SECTION
400 TO 499: PYLON AND NACELLE
500 TO 599: LEFT WING
600 TO 699: RIGHT WING
700 TO 799: LANDING GEAR
800 TO 899: DOORS

LH AND (RH) SIDE FUSELAGE ZONES



ZONES NUMBERS

U7Z08431 - U2XT1T0 - UM01D1000000001

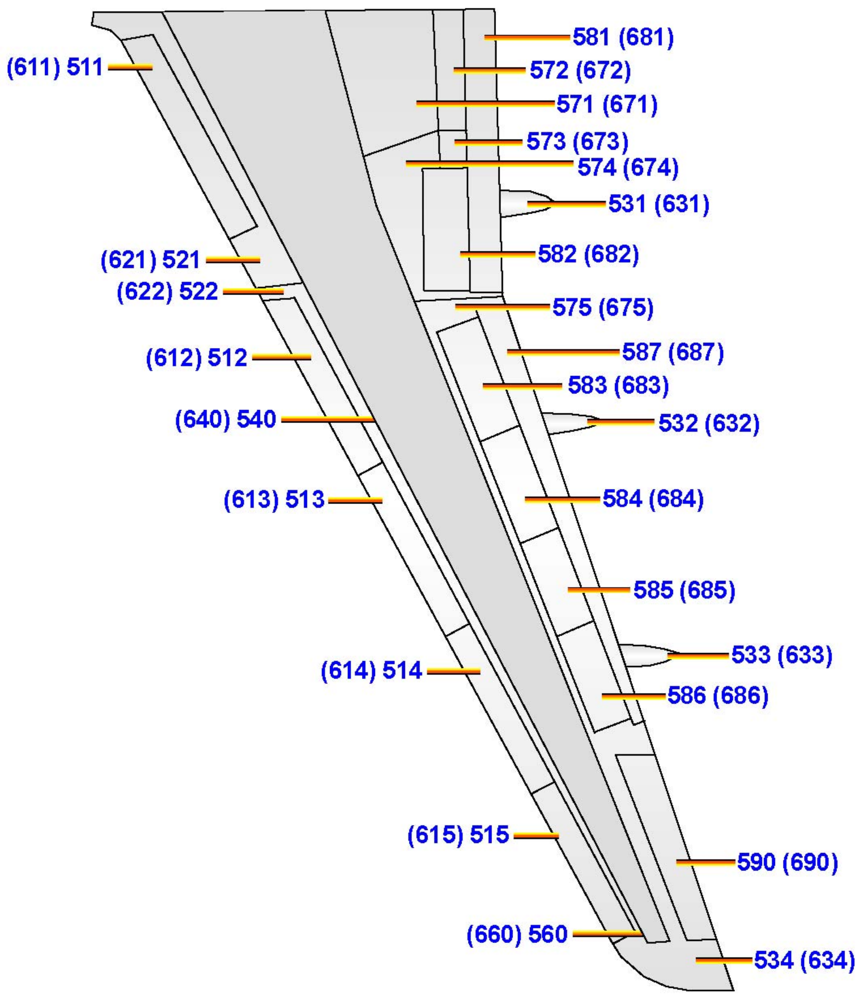
STRUCTURAL BREAKDOWN AND ZONING (3)

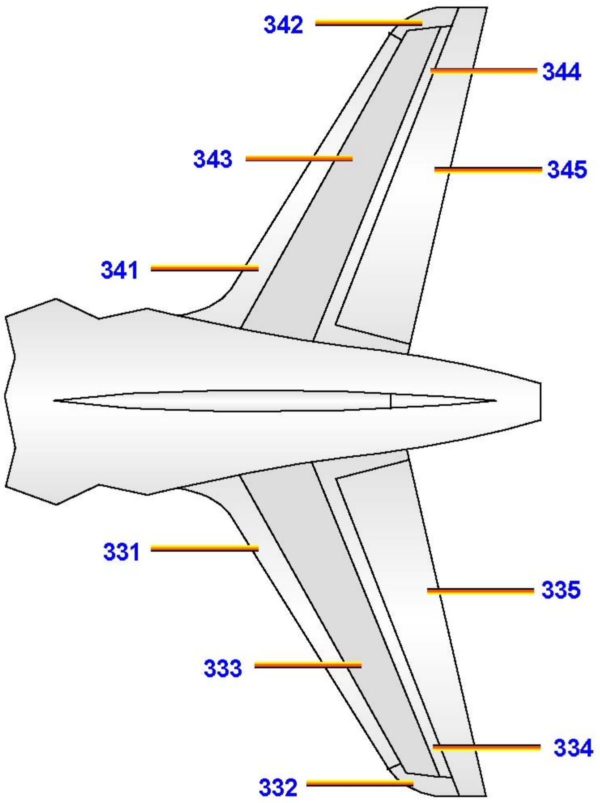
ZONES NUMBERS (continued)

WING (UPPER SURFACE) AND HORIZONTAL STABILIZER

The 500 numbers identify the LH wing zones, while the 600 numbers identify the RH wing zones. The sub-zones 330 and 340 identify the LH and RH side of the horizontal stabilizer.

LH AND (RH) SIDE WING ZONES





LH AND RH SIDE HORIZONTAL STABILIZER ZONES

ZONES NUMBERS - WING (UPPER SURFACE) AND HORIZONTAL STABILIZER

U7Z08431 - U2XT1T0 - UM01D1000000001

STRUCTURAL BREAKDOWN AND ZONING (3)

ZONES NUMBERS (continued)

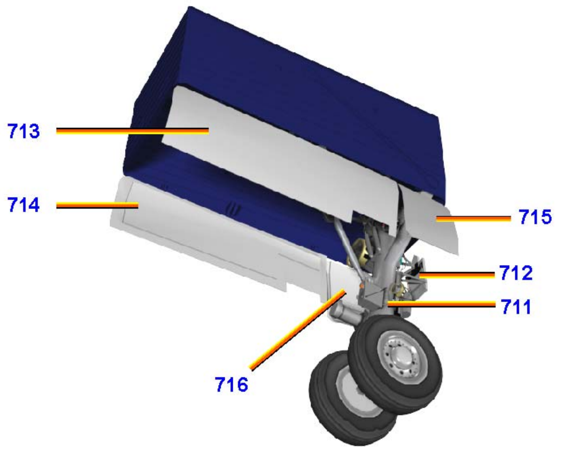
WING (LOWER SURFACE), BELLY FAIRING AND LANDING GEAR

The sub-zone 710 identifies the NLG. The sub-zones 730 and 740 identify the LH and RH MLG.
The sub-zone 190 indicates the belly fairing. 734 and 744 are the MLG door zone numbers.
Access doors and panels are identified by the number of the zone in which the panel is installed followed by a two letter suffix. These two letters are used to indicate the doors and panels. The first letter indicates which access door or panel it is, starting from the reference axis (A=first, B=second, ..., G=seventh, etc...). The second letter indicates the access door or panel location:
- T=top (upper) surface,
- B=bottom (lower) surface,
- R=right side,
- L=left side,
- Z=internal,
- F=floor panel,
- W=sidewall panel,
- C=ceiling panel.

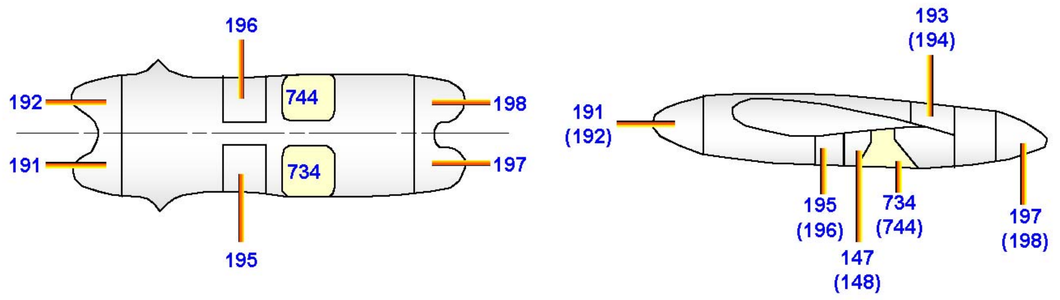
Here is an example of access panels on the left wing lower surface.

U7Z08431 - U2XT1T0 - UM01D1000000001

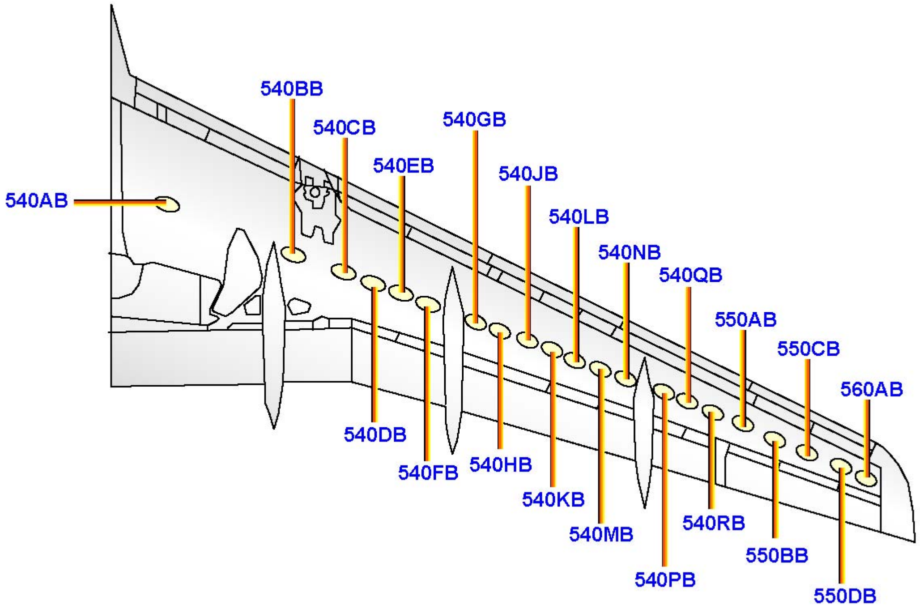
NOSE LANDING GEAR ZONES

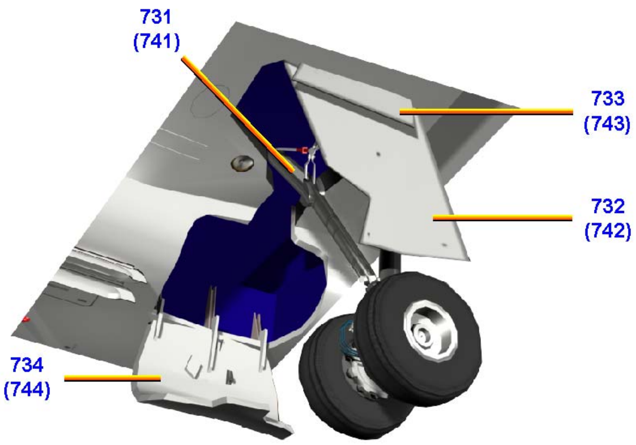


BELLY FAIRING ZONES



ACCESS PANELS ON LEFT WING LOWER SURFACE





LH AND (RH) MAIN LANDING GEAR ZONES

ZONES NUMBERS - WING (LOWER SURFACE), BELLY FAIRING AND LANDING GEAR

U7Z08431 - U2XT1T0 - UM01D1000000001

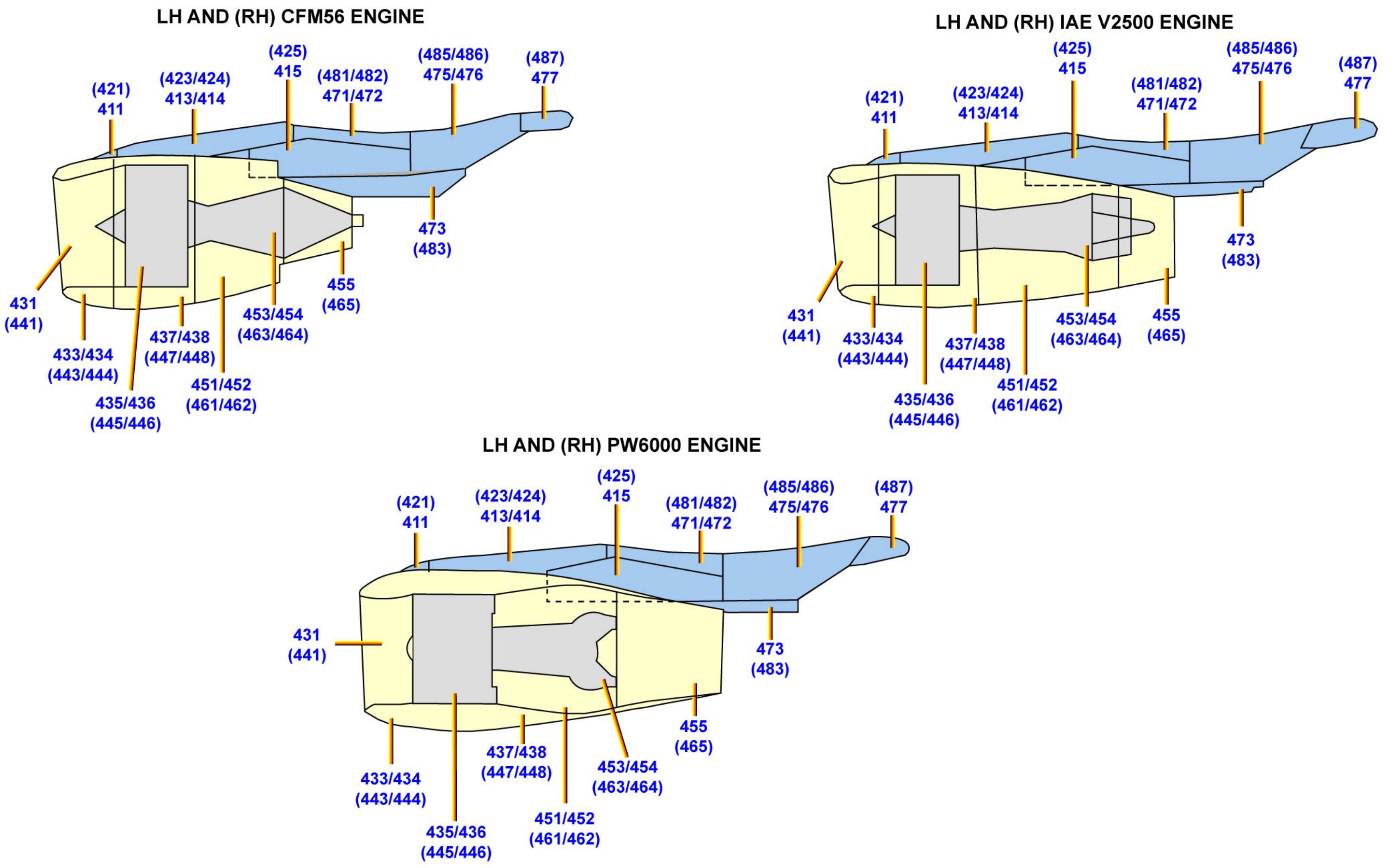
STRUCTURAL BREAKDOWN AND ZONING (3)

ZONES NUMBERS (continued)

NACELLE, PYLON, ENGINE

The difference between the LH and RH pylon and nacelle is made with the ten digits of the zone number 400. The difference between the LH side and RH side is identified by the last digit (Tens digit: odd for he left and even for the right). Within one engine, an odd zone number indicates the LH side and an even zone number indicates the RH side of the engine.

LH AND RH SIDE NACELLE AND PYLON ZONES



ZONES NUMBERS - NACELLE, PYLON, ENGINE

U7Z08431 - U2XT1T0 - UM01D1000000001

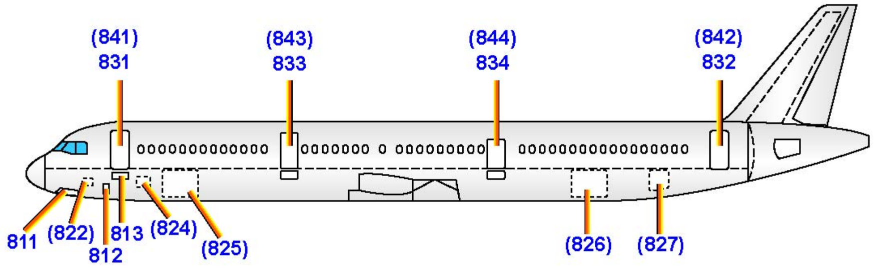
STRUCTURAL BREAKDOWN AND ZONING (3)

ZONES NUMBERS (continued)

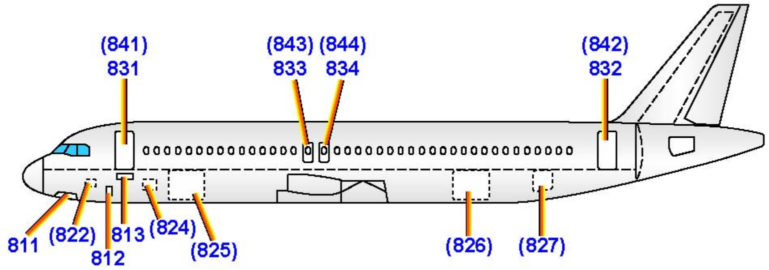
DOOR

The major zone 800 identifies the doors.

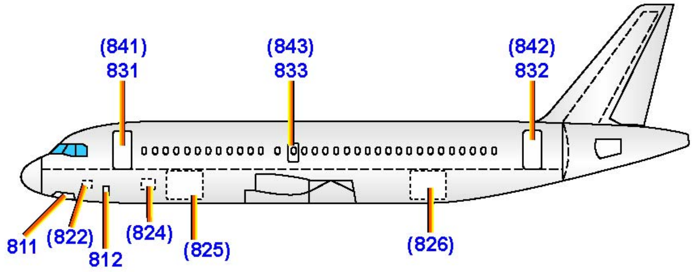
LH AND RH DOOR ZONES



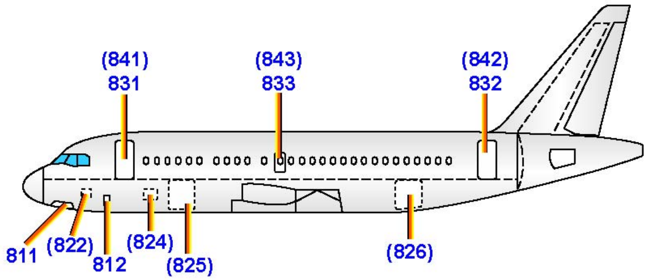
A321



A320



A319



A318

ZONES NUMBERS - DOOR

U7Z08431 - U2XT1T0 - UM01D1000000001

JACKING (2)

GENERAL

Three jacking points, when equipped with jacking pads, are used to lift the aircraft. The forward point "A" is located forward of the nose landing gear. The points "B" are located outboard of the engine pylons. A safety stay must be positioned at the rear of the aircraft after jacking to stabilize the aircraft. You can lift the aircraft at the forward jacking point only, with the wheels of the main landing gear on the ground.
When the aircraft is weighed on landing gear jacks the following jacking points must be used to lift it.
- 2 jacking points located in the main landing gear,
- 1 jacking point located in the nose landing gear.

LIMITATIONS

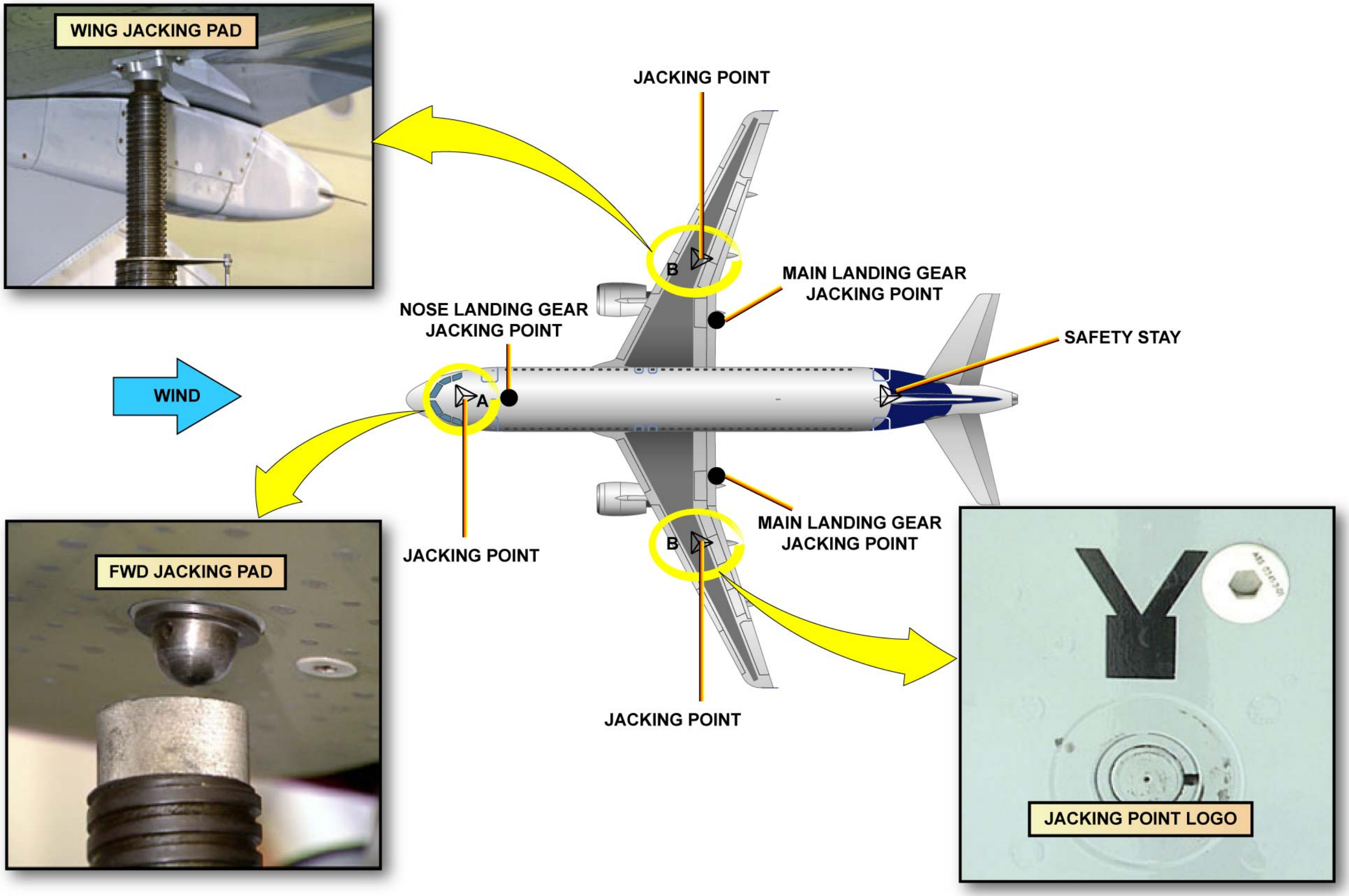
The open air jacking operation is limited if the wind velocity exceeds permissible values which depend on aircraft gross weight and center of gravity position. In any condition, the aircraft must be pointing upwind.

PRECAUTIONS

Before lifting the aircraft, you must be sure that the ground safety-locks are in position on the landing gears and the weight of fuel is applied equally on the two sides of the aircraft centerline. The three jacks have to be operated together. As soon as the jacking operation is finished, position the safety stay to stabilize the aircraft. Do not use the safety stay to lift the aircraft.

JACKING POINTS

Jacking pads have to be used under the jacking points to spread the loads.



GENERAL ... JACKING POINTS

JACKING (2)

LEVELING AND WEIGHING

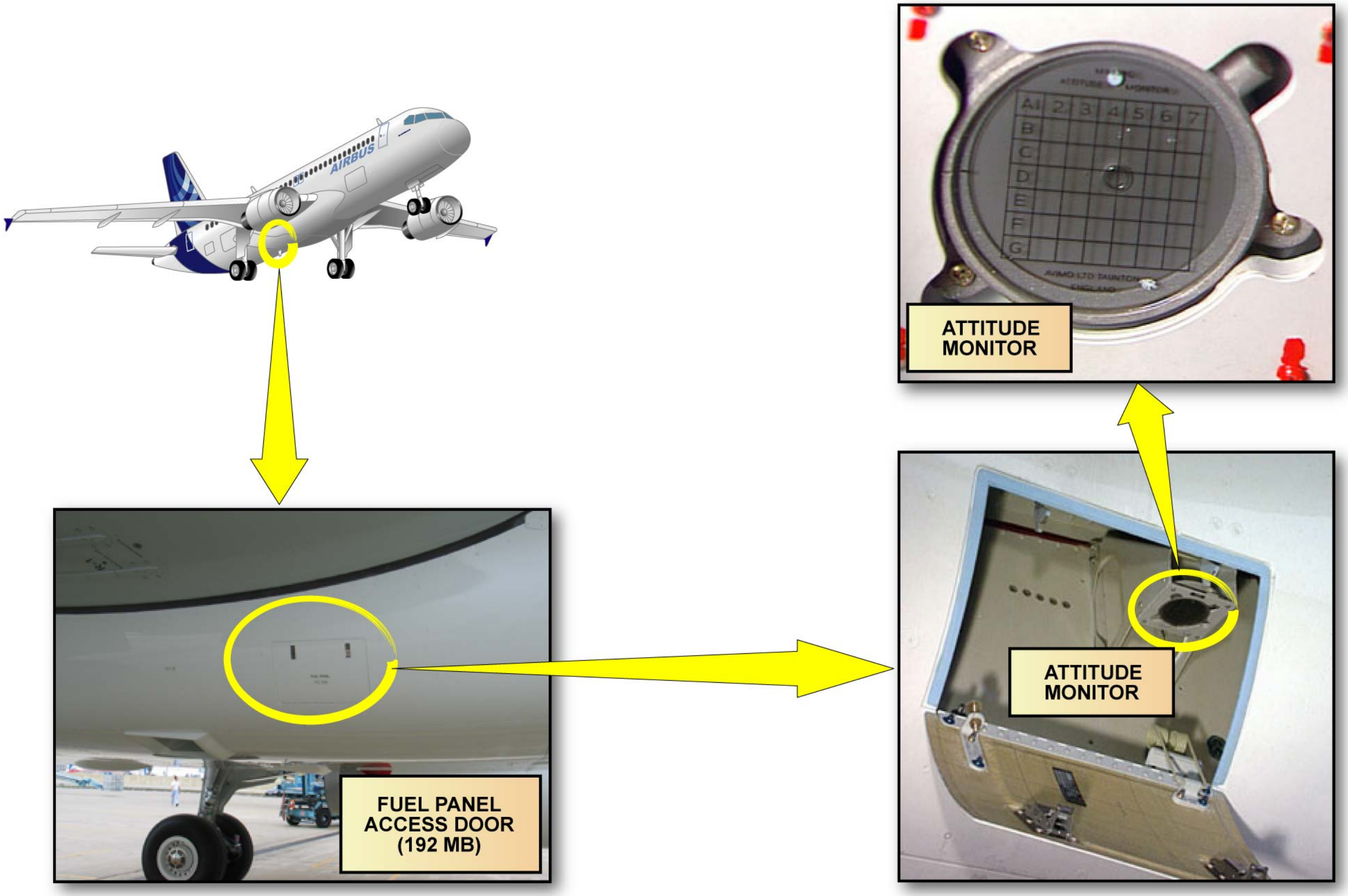
WEIGHING

You can weigh the aircraft with:
- the aircraft on jacks,
- the aircraft on its wheels,
- the aircraft on landing gear jacks.

Load cells on each jack or platform scales are used for weighing.

QUICK LEVELING USING THE ATTITUDE MONITOR

To ensure that excessive side loads are not placed on the jacks and on the aircraft structure, a quick leveling check must be carried out during the jacking operation. The procedure consists in operating the jacks of the aircraft to move the bubble to the D4 position in the attitude monitor, which is located in the Refuel/Defuel control panel recess. The D4 position corresponds to a longitudinal angle of 0 degrees and a lateral angle of 0 degrees.



LEVELING AND WEIGHING - WEIGHING & QUICK LEVELING USING THE ATTITUDE MONITOR

U7Z08431 - U2XT1T0 - UM07D1000000002

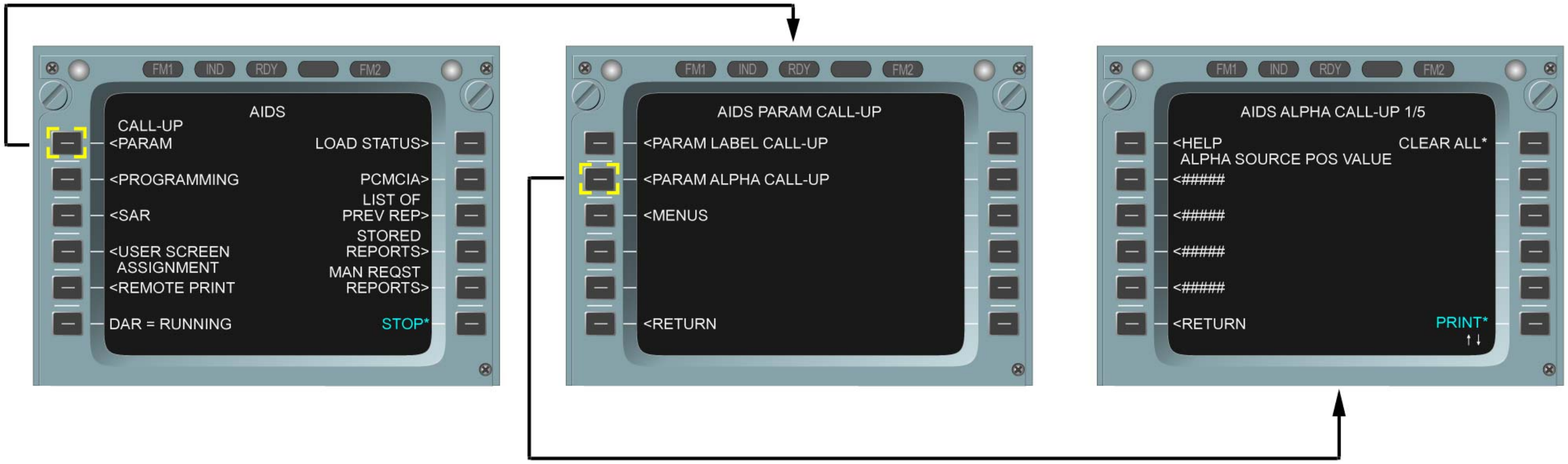
JACKING (2)

LEVELING AND WEIGHING (continued)

QUICK LEVELING PROCEDURE WITH THE ADIRU

First, follow the Inertial Reference (IR) alignment procedure. Then on the MCDU scratchpad the alpha call-up code has to be entered:
- PTCH for the pitch angle to do a check of the longitudinal alignment,
- ROLL for the roll angle to do a check of the transverse alignment.

To start this procedure, first of all the aircraft must be lifted. After that, read the pitch and roll angles in the MCDU scratchpad.
Then operate the hydraulic jack below the wing to get the transverse alignment.
Then operate the forward hydraulic jack to get the longitudinal alignment.
When you have done the longitudinal alignment, do a check of the transverse alignment.



LEVELING AND WEIGHING - QUICK LEVELING PROCEDURE WITH THE ADIRU

U7Z08431 - U2XT1T0 - UM07D1000000002

TOWING AND TAXIING (2)

TOWING

WARNINGS AND CAUTIONS

Obey the warning and cautions before, during and after to tow or pushback the A/C.

WARNING

MAKE SURE THAT THE GROUND SAFETY-LOCKS ARE IN POSITION ON THE LANDING GEAR.

MAKE SURE THAT WHEN THE A/C MOVES WITH ITS POWER ON THE GROUND:
- NO PERSONS GO WHERE THE A/C CAN CAUSE THEM INJURY OR CAN KILL THEM.
- NO OBJECTS STAY WHERE THE ENGINES CAN BLOW THEM AWAY OR CAN PULL THEM INTO THE ENGINES BY SUCTION.

OBEY THESE SAFETY PRECAUTIONS DURING TOWING, PUSHBACK OR MOVEMENT OF THE A/C.
MAKE SURE THAT THE PATH OF THE A/C IS CLEAR.
MAKE SURE THAT NO PERSONS SIT OR STAND ON THE TOW BAR OR USE THE TRACTOR AS TRANSPORT THIS IS TO PREVENT THE RISK OF INJURY.

THE PERSON WHO OPERATES THE BRAKES FROM THE COCKPIT DURING TOWING/TAXIING MUST HAVE HIS SIT BELT ATTACHED. IF NOT THERE IS A RISK OF INJURY IF THE A/C STOPS SUDDENLY.

WHEN YOU COMPLETE THE TOWING OPERATION, MAKE SURE THAT THE NOSE WHEELS ARE ALIGNED WITH THE A/C CENTERLINE. THE TWIN WHEELS MAY COME BACK TO THE CENTERED POSITION.

CAUTION

SET AND CALIBRATE THE TOWING AND TURN SHEAR PINS BEFORE YOU TOW OR PUSH BACK THE A/C. THIS IS TO PREVENT HIGH LOADS WHICH CAN CAUSE DAMAGE TO THE NOSE LANDING GEAR AND/OR THE A/C STRUCTURE.

DO NOT TOW OR MOVE THE A/C ON THE GROUND IF THE ENGINES COWLS ARE OPEN.
MOVEMENT OF THE A/C WITH THE COWLS OPEN CAN CAUSE DAMAGE TO THE COWLS AND THE NACELLE STRUCTURE.

TOWING - WARNINGS AND CAUTIONS

U7Z08431 - U2XT1T0 - UM09D1000000001

TOWING AND TAXIING (2)

TOWING (continued)

TOWING WITH THE NOSE GEAR FROM THE FRONT

This film describes how to push the A/C rearwards or tow the A/C forwards with the nose gear.
The A/C may be towed or pushed back:
- at maximum ramp weight,
- with the engines shut down or running at idle.
To begin the procedure, make sure:
- that the safety devices are installed on the landing gears (L/G),
- the wheel chocks are in place,
- and check if the parking brake is ON.
Do not tow the A/C if the dimension H is more than 300 mm (11.8 in). If you do, you can cause damage to the internal centering cams of the nose landing gear (NLG).
Referring to your A/C maintenance manual, make sure that the A/C is stable. Let us suppose that this procedure has been correctly done.
During this procedure, depending on the configuration you are in, the A/C needs to be energized either by using the APU, a specific ground cart, an engine running, or by using the tractor itself. Let us suppose that the A/C is already energized and the EIS start procedure done.
Outside, on the nose wheel steering deactivation electrical-box, set the ground-towing control lever to the towing position and install the pin.
In the cockpit,
- on the upper ECAM page, the "Nose.WHEEL STEERinG DISConnected" message comes into view on the memo page.
- check on the Yellow brake-pressure triple-indicator that the accumulator pressure pointer is in the green range.
We recommend pressurizing the yellow hydraulic system using the yellow electrical pump, thus, the braking system will be more efficient and safer. Now, we have to install the tow bar.

CAUTION: Caution: make sure that the tow bar has:
- a damping system
- a calibrated shear pin
- two calibrated turn shear pins.
This is to prevent high loads causing damage to the L/G.

Refer to your A/C maintenance manual for the calibration of these pins.
On the NLG, install the tow bar on the tow fitting and connect the tow bar to the tractor.

CAUTION: Caution: put the parking brake control switch in the off position before you tow or push back the A/C. This is to prevent high loads causing damage to the NLG.

On the Yellow brake-pressure triple-indicator, the brakes pressure pointers go down.
In the cockpit, set the lighting system:
- set the exterior light navigation and logo switch to ON.
- at night, set the interior light dome switch to bright and if the anti-collision lighting is necessary for the local airport regulations or the airline procedures, set the exterior light beacon switch to ON.
On the VHF system:
- in order to communicate with the control tower during towing operations, release out the VHF pushbutton switch and select the control tower frequency on the radio management panel.
- in order to communicate with the ground mechanics, on the audio control panel, set the interphone radio switch to the interphone position and release out the interphone reception pushbutton.
For safety reasons, a distance of 3 meters (10 ft) must be kept clear around the nose wheels, tow bar and tractor when the aircraft moves.
Towing speed limitation depends on the position of the passenger/crew and cargo doors. For these speed limitations refer to your A/C maintenance manual.

The maximum permitted steering angle on each side of the A/C centerline is 95 degrees. When you use the front fittings to push the A/C rearwards with engine at idle this angle is limited to 40 degrees.
At this point, be sure that all warnings and cautions of your A/C maintenance manual procedure and previous precautions are applied.
Now, the A/C can be towed slowly and smoothly. Two other persons have to monitor the wing tips during the towing operation and one person is required in the cockpit in order to operate the brakes.
When you complete the towing operation, make sure that the nose wheels are aligned with the A/C centerline.
Inform the cockpit to apply the parking brake, and check that the parking brake light is ON on the nose wheel steering deactivation electrical-box.
Put the wheel chocks in position.
Disconnect the tow bar from the nose gear fittings. On the nose wheel steering deactivation electrical-box, remove the safety pin and set the ground-towing control lever to the normal position. At the same time, in the cockpit, on the ECAM memo display the message "N.WHEEL STEERG DISC" disappears.
On the lighting system:
- reset the exterior light beacon and navigation & logo switches to OFF.
- reset the interior light dome switch to OFF.
On the communication system:
- cut the cockpit/control tower VHF link by pressing in the VHF pushbutton on the radio management panel.
- reset the interphone radio switch to the neutral position.
Depressurize the yellow hydraulic system, do the EIS stop procedure and de-energize the A/C electrical circuits.

TOWING - TOWING WITH THE NOSE GEAR FROM THE FRONT

U7Z08431 - U2XT1T0 - UM09D1000000001

This Page Intentionally Left Blank

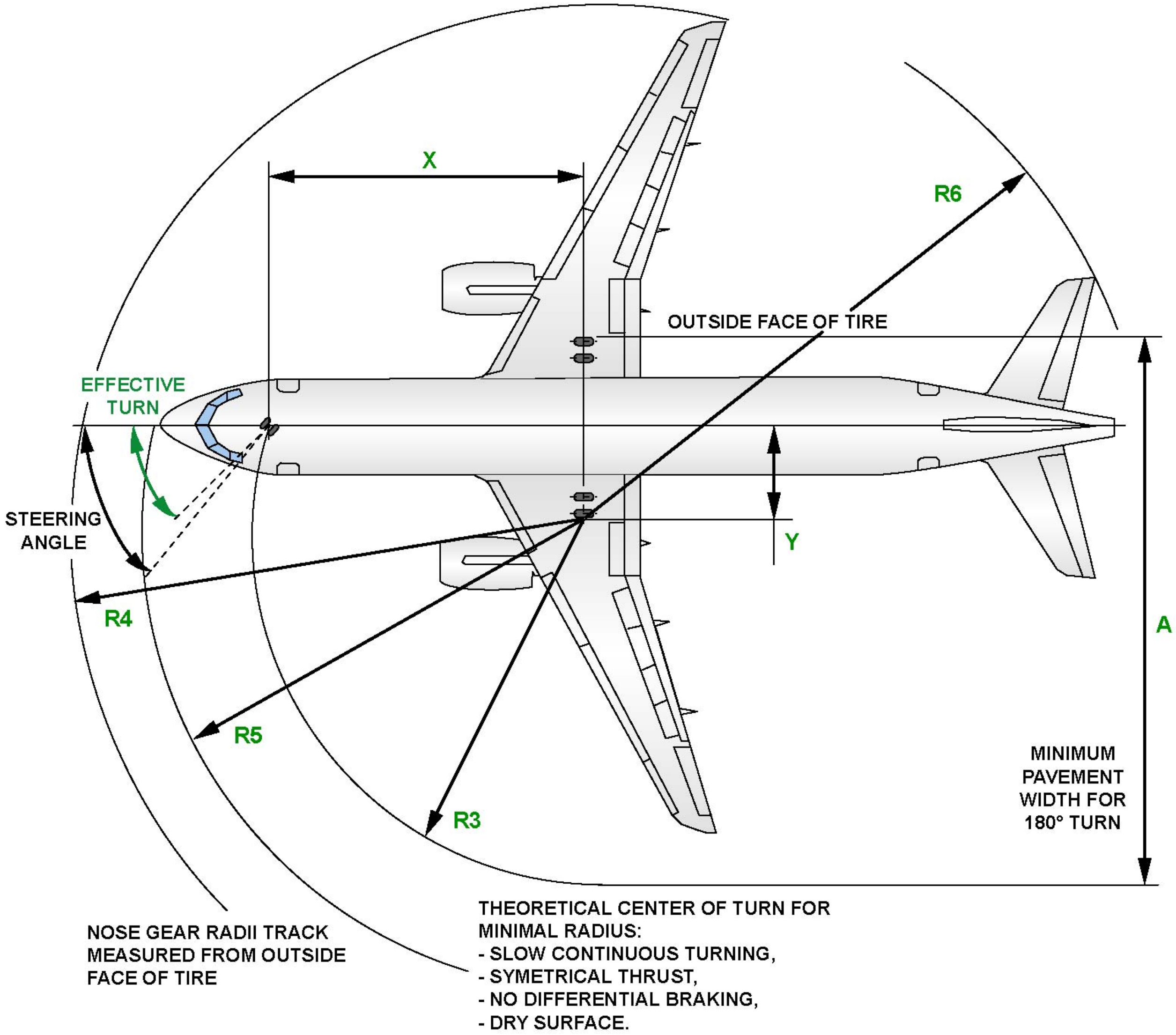
TOWING AND TAXIING (2)

TAXIING AND ASSOCIATED PRECAUTIONS

TURNING RADII

The movement of the aircraft with its power on the ground is called taxi of the aircraft. During taxi of the aircraft, the minimum turning radii must be respected.

U7Z08431 - U2XT1T0 - UM09D1000000001



AT 75° STEERING ANGLE:

	A318	A319	A320	A321
EFFEC TURN	73.20°	70.03°	70°	73°
X	33.63 10.25	36.22 11.04	41.5 12.64	55.4 16.91
Y	10.1 3.1	13.2 4.01	15.1 4.6	16.6 5.1
A	61.2 18.7	67.7 20.64	75.1 22.9	90.5 27.6
R3	36.3 11.1	39.7 12.11	45.3 13.81	59.1 18
R4	67.6 20.6	70.8 21.58	72.2 21.99	74.3 22.7
R5	51.3 15.6	54.5 16.6	60 18.3	74 22.6
R6	58.8 17.9	64.9 19.77	71.9 21.91	80.3 24.5

FEETS
METERS

TAXIING AND ASSOCIATED PRECAUTIONS - TURNING RADII

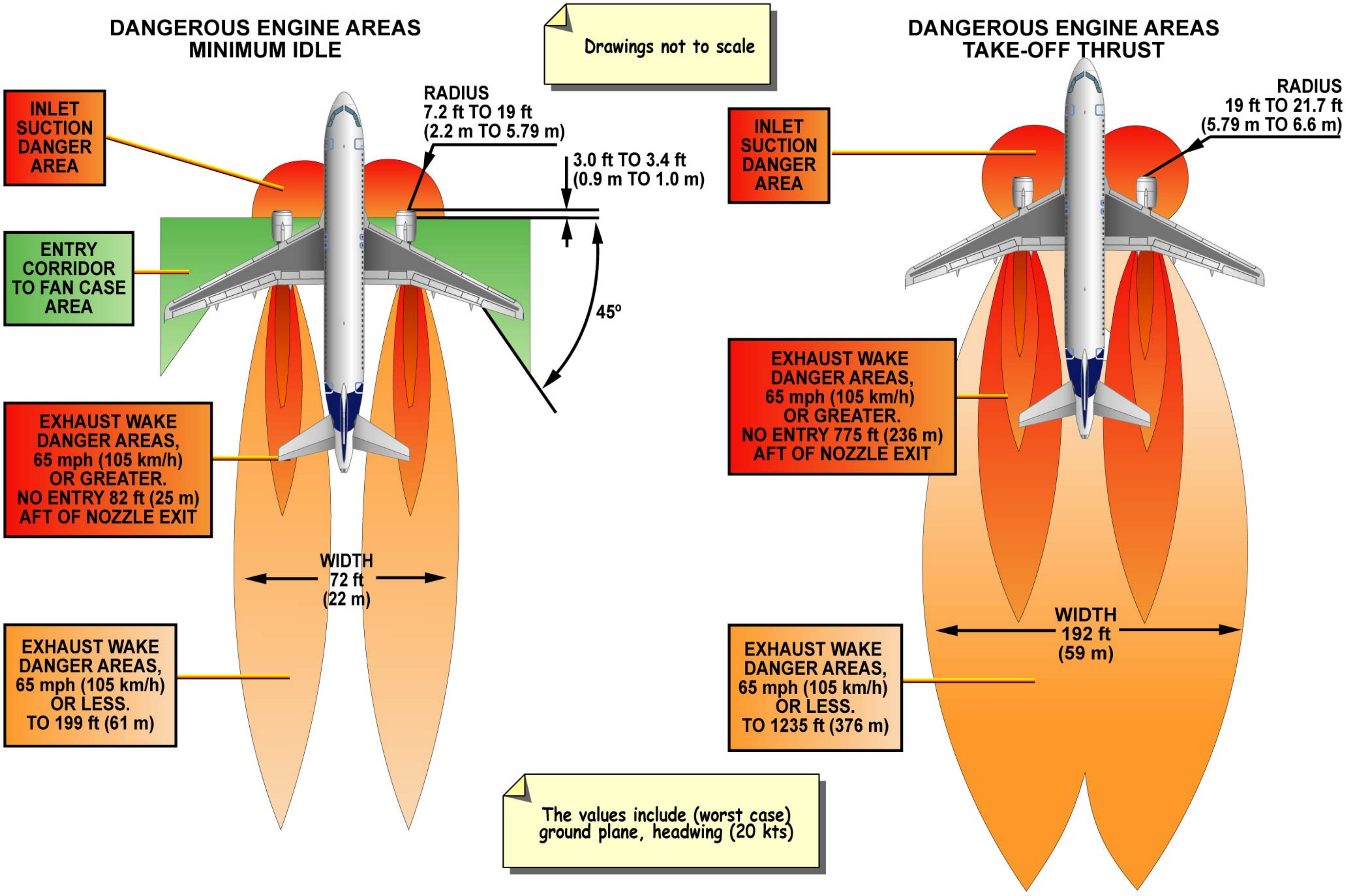
TOWING AND TAXIING (2)

TAXIING AND ASSOCIATED PRECAUTIONS (continued)

DANGER AREAS

Safety precautions must be taken to avoid danger from engine suction and exhaust areas. Access to the engine is only allowed through the entry corridor. Note that the entry corridor must be closed for wind directions greater than 90º. There is no safe access corridor when the engine is running above minimum idle. Depending on the distance from the running engine and on its power setting, it is necessary to wear ear protection and to respect the maximum time exposure.

U7Z08431 - U2XT1T0 - UM09D1000000001



TAXIING AND ASSOCIATED PRECAUTIONS - DANGER AREAS

U7Z08431 - U2XT1T0 - UM09D1000000001

PARKING AND MOORING (2)

GENERAL

This module covers the following subjects of the aircraft:
- parking, not more than 2 days,
- storage,
- and mooring of the landing gears.

The module is destined to cover the entire Single Aisle Airbus family, which includes the A318, A319, A320 and A321 airplanes.

PARKING (NOT MORE THAN 2 DAYS)

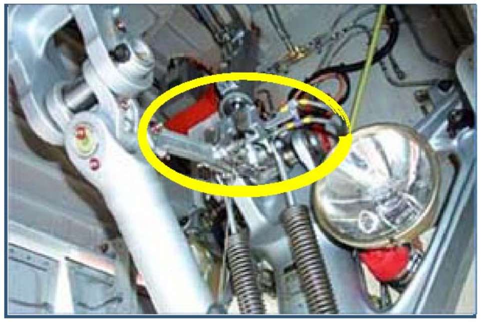
This section gives the procedure to park the aircraft in standard weather conditions but:
- if the aircraft is parked in high wind conditions, a check of the aircraft stability is needed, and moor the aircraft if necessary,
- if the aircraft is parked in cold weather conditions, do the cold weather maintenance procedures.

PARKING PROCEDURE

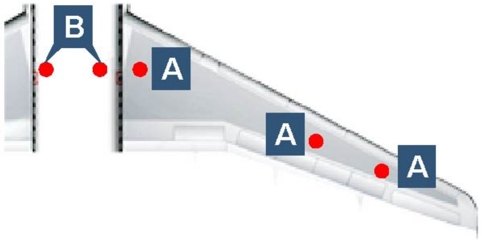
To park the aircraft follow these tasks:
- If necessary, clean the aircraft.
- Park the aircraft on a flat surface. Make sure that the wheels of the nose landing gear are on the aircraft axis and the aircraft points into the wind.
- Install the safety devices on the landing gears.
- Make sure that the flight control surfaces are retracted.
- Put the wheel chocks in position:
- for the NLG, in front of and behind the wheels,
- for the MLG, in front of and behind wheels.
- Ground the aircraft.
- If necessary refuel the fuel tanks to 30% minimum of their total capacity.
- Drain water from all the fuel tanks.
- Open the cockpit and cabin window shades. Make sure that the sliding windows are closed.
- Installation of the Protection Equipment: Protect all the probes, the engines and the APU with adapted protection equipment.
- On the overhead panel 25VU, on the CABIN PRESS section, push the DITCHING pushbutton switch to close the ventilation skin valves and the outflow valves.

PARKING PROCEDURE

- In cold weather conditions, do the cold weather procedures.
- Clean the aircraft if necessary
- Park the aircraft on a flat surface
- Install the landing gears safety devices
- Flight control surfaces retracted
- THS set to two degrees up
- Put the wheel chocks in position
- Ground the aircraft
- Refuel tanks to a minimum of 30%
- Drain water from all fuel tanks
- Open all window shades
- Close cockpit sliding windows
- Install protection equipment (probes, engines, APU)



DRAIN WATER FROM ALL FUEL TANKS



(25VU)

AIRCRAFT MAINTENANCE CONFIGURATION:
- On the panel 25VU, push the ditching pushbutton switch
- De-energize the aircraft electrical circuits

GENERAL & PARKING (NOT MORE THAN 2 DAYS)

U7Z08431 - U2XT1T0 - UM10D1000000001

PARKING AND MOORING (2)

STORAGE PROCEDURE

Certain maintenance tasks must be performed to prepare the aircraft for storage. See AMM.
During the storage period, periodic ground checks must be performed. See AMM.
Certain tasks must be performed to return the aircraft to operation after the storage. See AMM.

AIRCRAFT STORAGE

STORAGE PROCEDURE

PARKING AND MOORING (2)

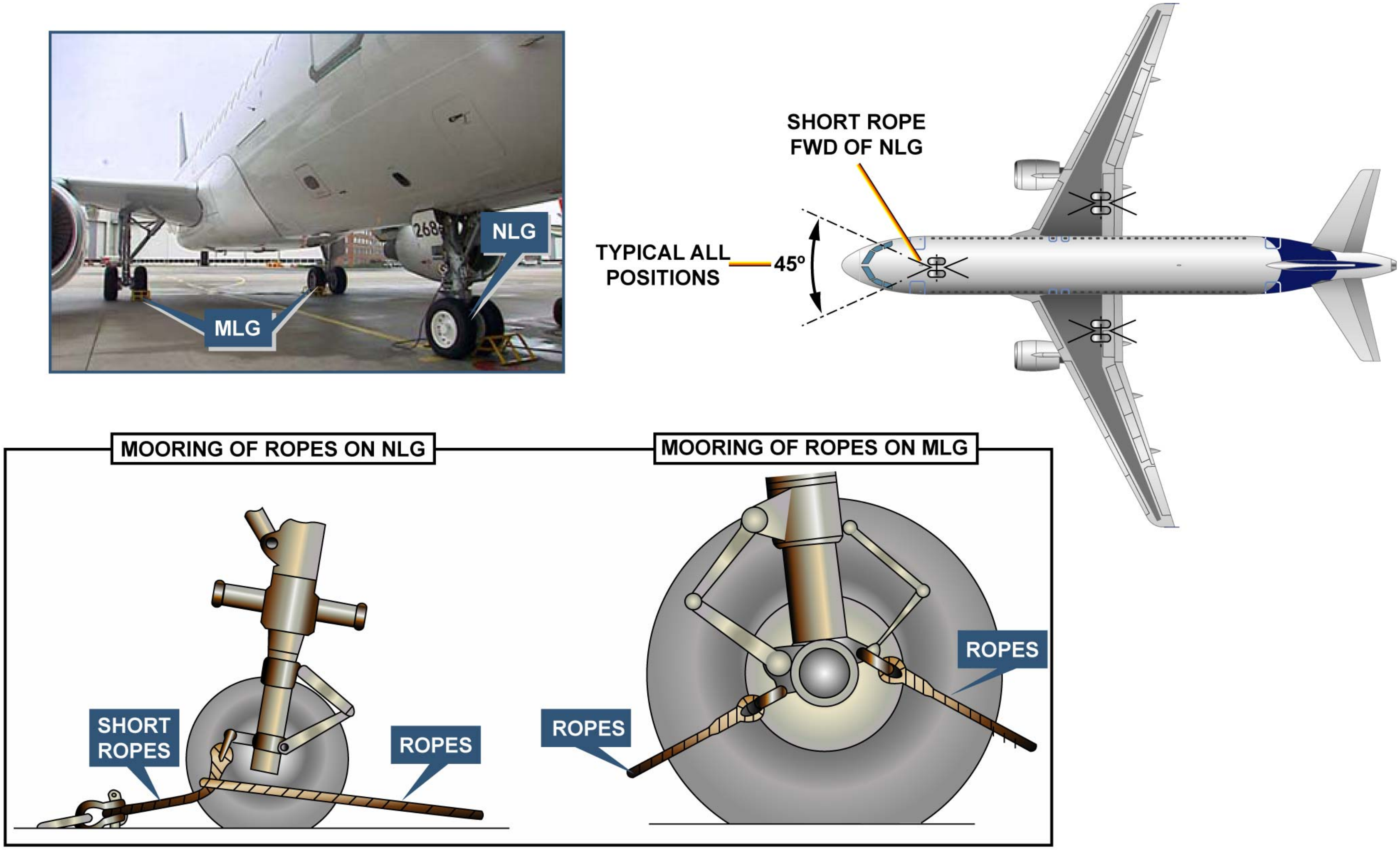
MOORING OF THE AIRCRAFT

The purpose of mooring is to prevent damage to the aircraft on the ground in high wind conditions.
For wind speeds less than 50 kts:
- mooring is not necessary if the aircraft configuration is in the limits given in chapter 05-57-00.

If the aircraft points into the wind and wind speed is:
- between 50 and 70 Kts, moor the aircraft at the NLG,
- more than 70 Kts, moor the aircraft at the NLG and MLG.

If the aircraft does not point into the wind or the direction of the wind is not stable:
- for wind speeds or gusts more than 50 Kts, moor the aircraft at the NLG and the MLG.

AIRCRAFT MOORING



MOORING OF THE AIRCRAFT

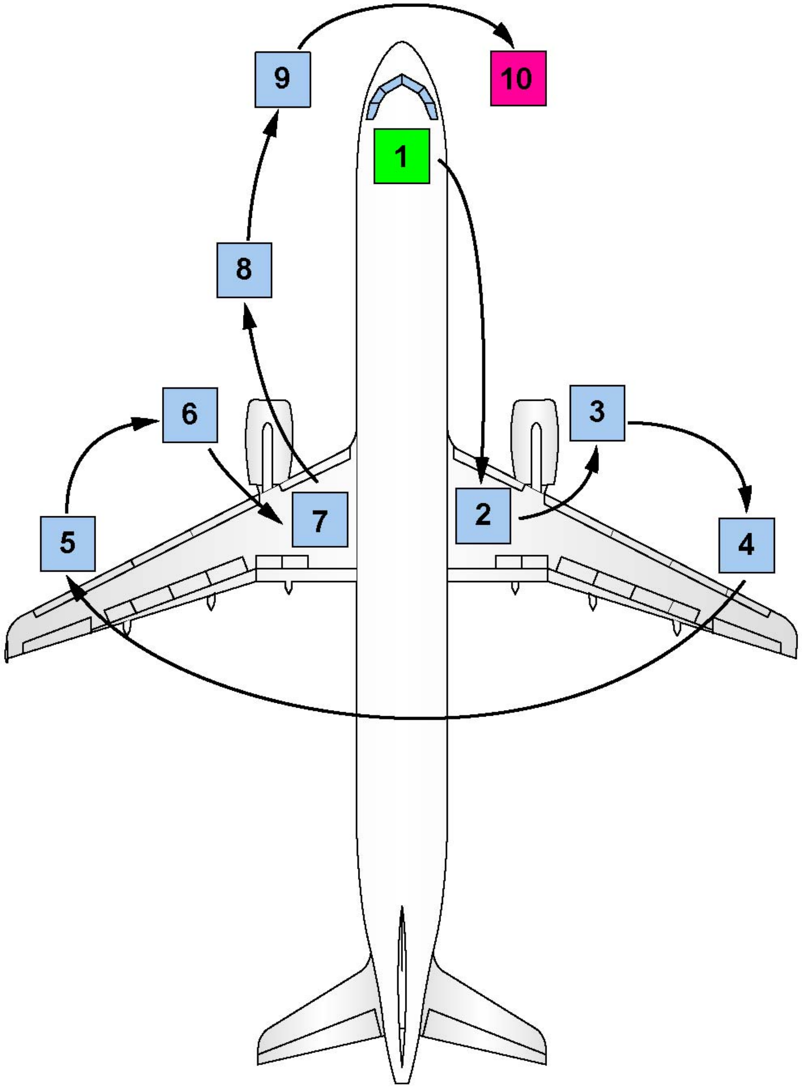
MAINTENANCE EXTERNAL VISIT (3)

PRESENTATION

This film presents the A321 outside safety inspection and cockpit Check-List (CL) to be performed before powering the A/C for maintenance purposes. Various main stations have been defined. The inspection starts with the nose station. First verify that the NLG chocks are in place. Then, observe that the NLG doors are closed. Make sure that the NLG safety pin is installed. The NLG steering pin must be as required. Finally, verify that the A/C is electrically grounded. The second step consists of inspecting the right MLG. Start by checking that the MLG door is closed. Then, verify that the MLG safety sleeve is installed. Lastly, observe that the MLG chocks are in place. Let us continue with the right engine station, the first thing to do is to make sure that the engine right side access doors are secured. The same must be done for the left side. Check that the engine fan cowls and thrust reverser cowls are secured. The right wing is the 4th station. Observe the position of the slats and then, the flaps. The spoilers must be retracted. Then move to the left wing station. Here again observe the position of the flaps and then, the slats. Although make sure that the spoilers are retracted. The next step is the left engine station. Check that the engine right side access doors are secured. Then pass around the engine to verify that the left side access doors are secured. Make sure that the engine fan cowls and thrust reverser cowls are secured. Proceed with the left MLG station. The Ram Air Turbine (RAT) safety device must be in the stowed position. Continue by checking that the MLG door is closed and that the MLG safety sleeve is installed. Before moving on, observe that the MLG chocks are in place. In the A/C area station you have to make sure that the A/C area is clean and clear of tools and any other items. Now you have to check the 9th station: the external power receptacle. Verify that the external power is connected and available. Finally enter the cockpit for the last station. Start by checking the rear and the overhead circuit breaker, then have a look to the emergency equipment. This consists in: verifying that the escape ropes are present, observing that the fire extinguisher is in position, making sure that the cockpit is equipped with smoke hoods, checking that the fire protective gloves are present, ensuring the crash axe is in position, checking that the cockpit is equipped with life vest, verifying that the oxygen masks are present, observing that the flash lights are in position. You must then make sure that the wipers are off. BATtery 1 and 2 P/BSW must be off and their voltage should be about 25 volts. Proceed by setting the BAT1 P/BSW to AUTO. Then, set the BAT2 P/BSW to AUTO, check that the right hand dome light is on. Verify that the speed brake handle is in the RETract disarm position. If the speed brake handle disagrees with the surface position maintenance action is due. On the center pedestal make sure that the thrust levers are in the idle position. Engine master switches 1 and 2 must be in the OFF position and the engine ignition mode selector in the NORMal position. Observe that the flap handle is set according to surface position. If engine reverse cowls have to be opened for maintenance action, the slats must to be retracted. Still on the center pedestal, check that the radar is off, also verify that the ATC transponder is off. Make sure that the gravity gear extension crank handle is in the reset stowed position. On the instrument panel observe that the three green triangles on the LanDinG GEAR panel are on. The control safety check list should now have been accomplished. On the overhead panel set the EXTernal PoWeR P/BSW to ON, also set the GENerator 1 P/BSW to on and the GEN2 P/SW to ON. Scan and check that no amber lights are on except GEN1 and 2 FAULT light on panel 44VU. The GALY & CAB P/BSW should be as required. Finally verify that there is no light on the VENTilation panel. The A/C is now ready for maintenance.

NOTE: This film shows an A321 but the procedure is also valid for A318, A319 and A320 aircrafts.

U7Z08431 - U2XT1T0 - UM01D4000000001



MAINTENANCE EXTERNAL VISIT

1- NOSE STATION
2- RIGHT MAIN LANDING GEAR STATION
3- RIGHT ENGINE STATION
4- RIGHT WING STATION
5- LEFT WING STATION
6- LEFT ENGINE STATION
7- LEFT MAIN LANDING GEAR STATION
8- AIRCRAFT AREA
9- NOSE STATION EXTERNAL POWER RECEPTACLE
10- COCKPIT STATION

PRESENTATION

MAINTENANCE EXTERNAL VISIT (3)

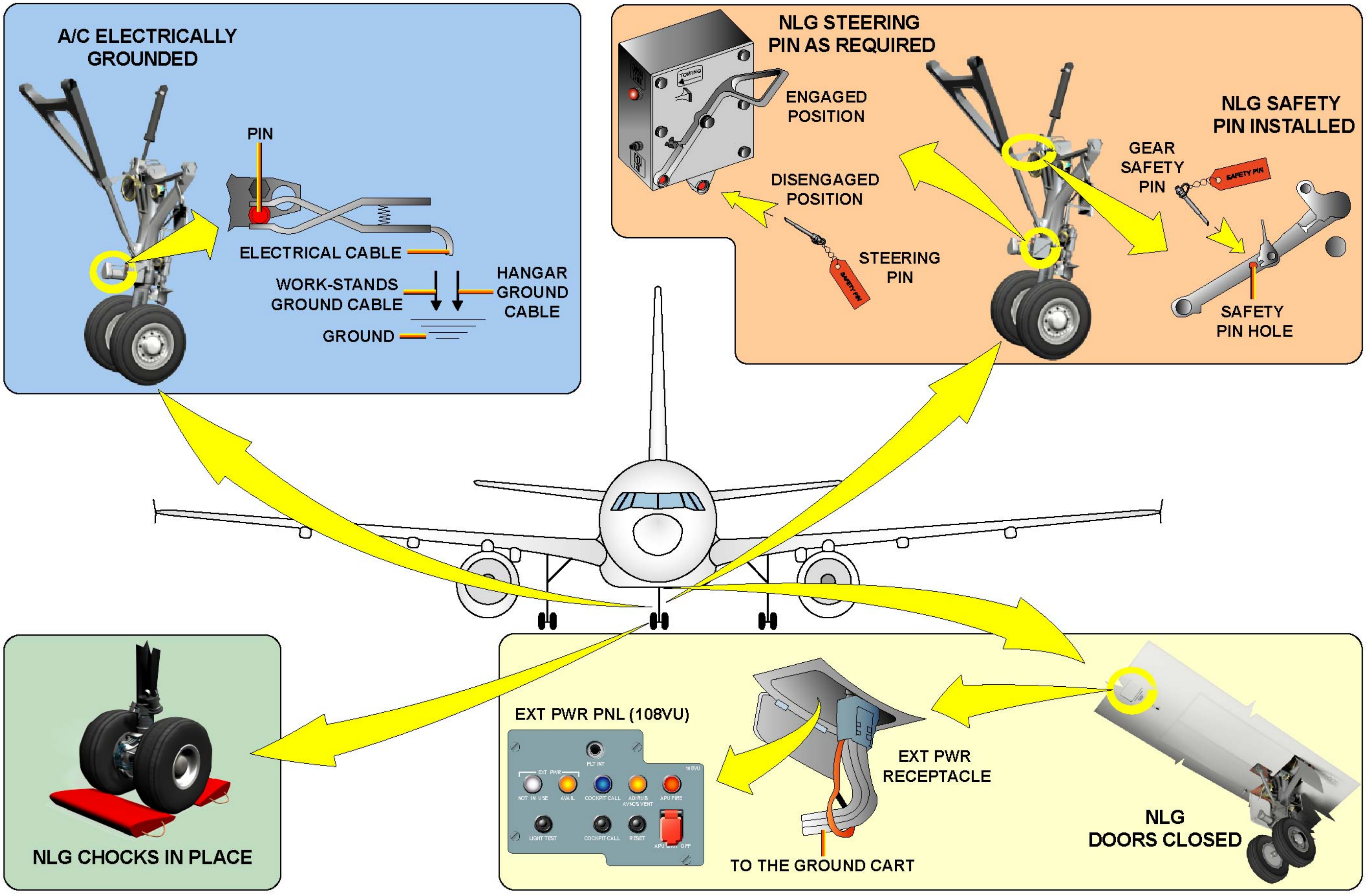
STEP BY STEP

The following topics develop step by step the previous film presentation.

NOSE STATION AND EXTERNAL POWER RECEPTACLE

To the station 1, in first, verify that the NLG chocks are in place. Then, observe that the NLG doors are closed. Make sure that the NLG safety pin is installed. The steering pin must be as required. Finally, verify that the A/C is electrically grounded.

NOTE: Note: The A/C can also be grounded from the MLG.
For the station 9, verify that the external power is connected and available.



STEP BY STEP & NOSE STATION AND EXTERNAL POWER RECEPTACLE

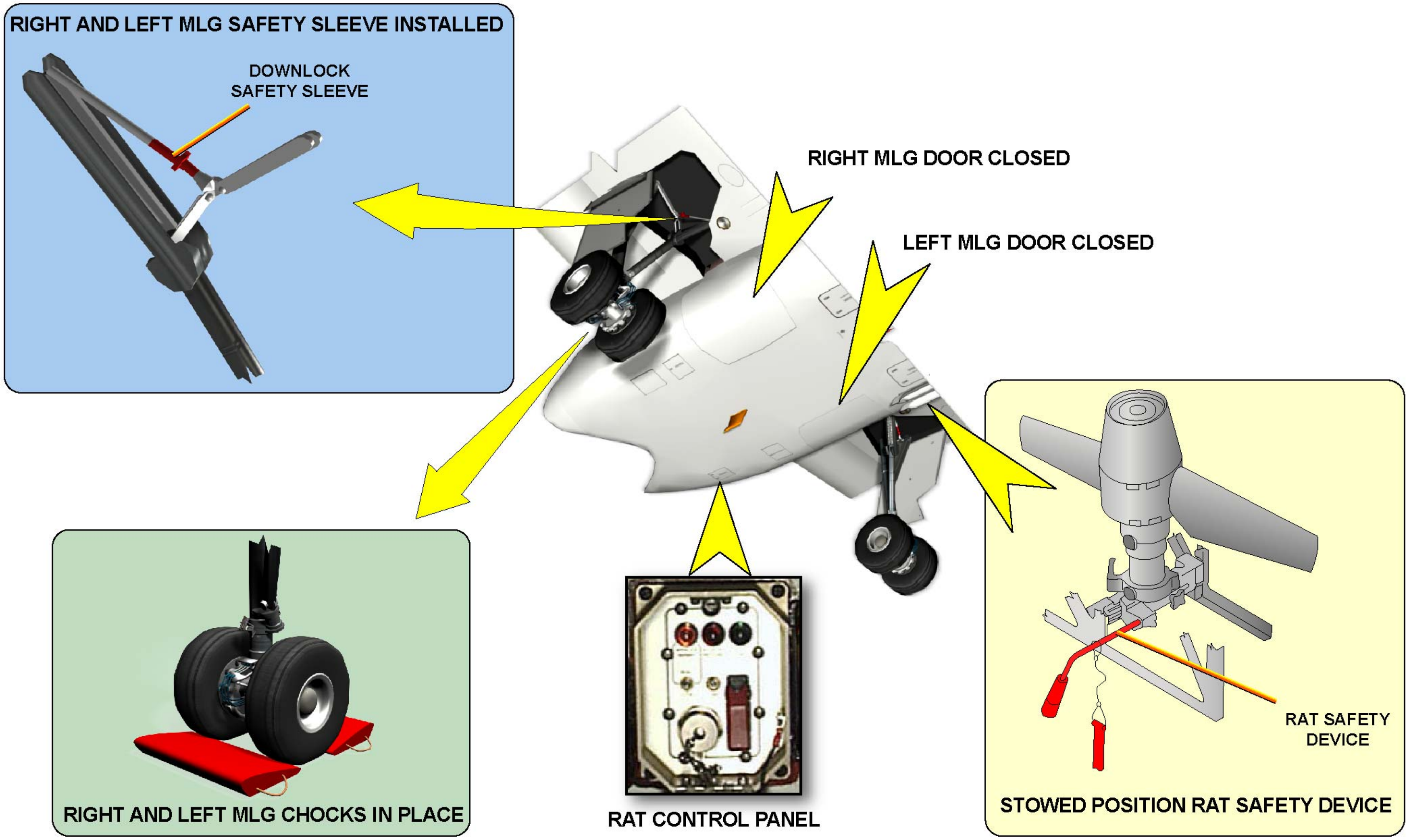
U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

RIGHT AND LEFT MLG STATION

The station 2 and 7 consist of inspecting the Right (R) and Left (L) MLG. Start by checking that the MLG door is closed. Then, verify that the MLG safety sleeve is installed. Finally, observe that the MLG chocks are in place.
To the left station, the Ram Air Turbine (RAT) stowed position safety device must be installed.

U7Z08431 - U2XT1T0 - UM01D4000000001



RIGHT AND LEFT MLG STATION

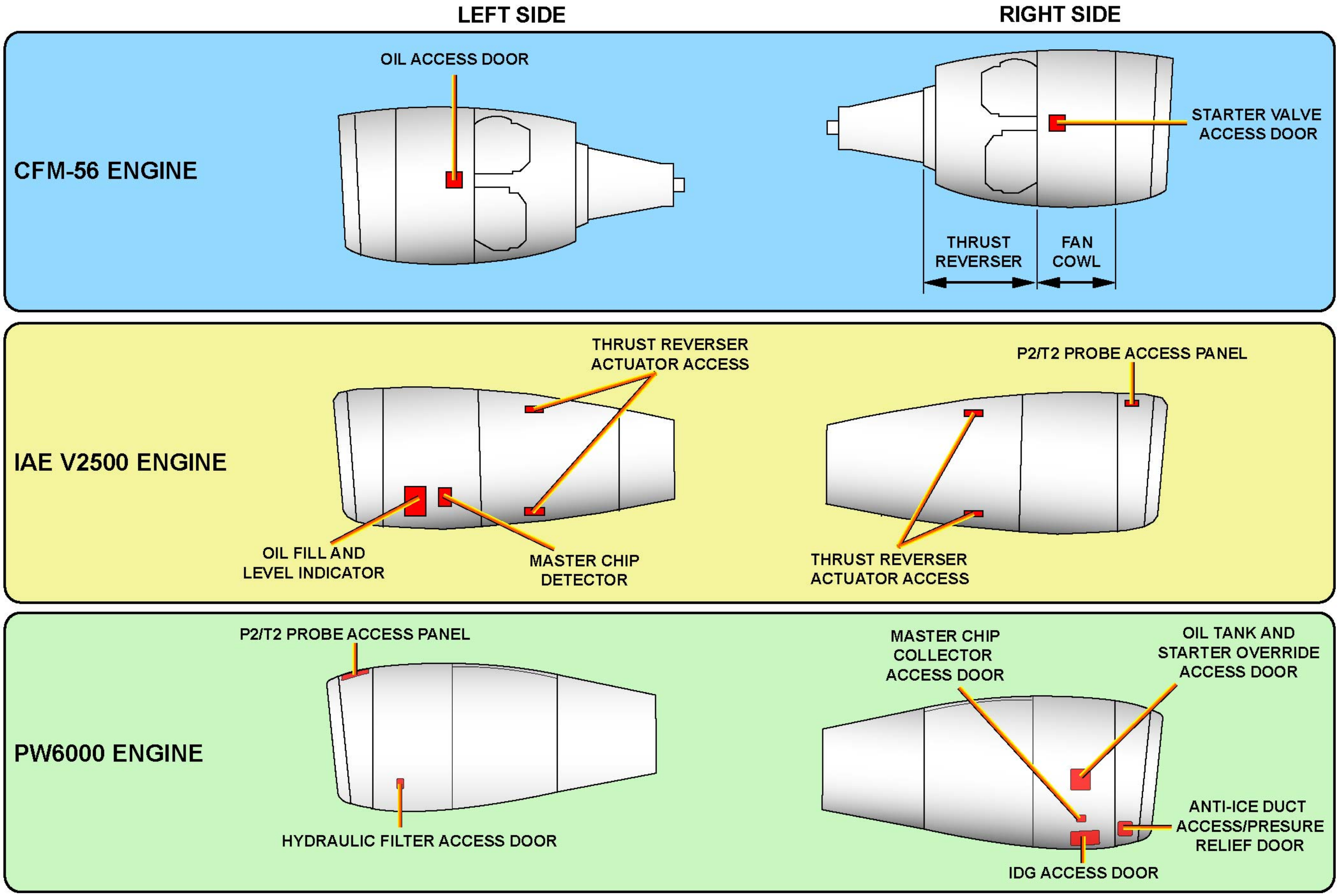
U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

RIGHT AND LEFT ENGINE STATION

RIGHT AND LEFT ENGINE SIDE ACCESS DOORS

On station 3, the first thing to do is to make sure that the engine right and left side access doors are secured. The same must be done on station 6.



RIGHT AND LEFT ENGINE STATION - RIGHT AND LEFT ENGINE SIDE ACCESS DOORS

U7Z08431 - U2XT1T0 - UM01D4000000001

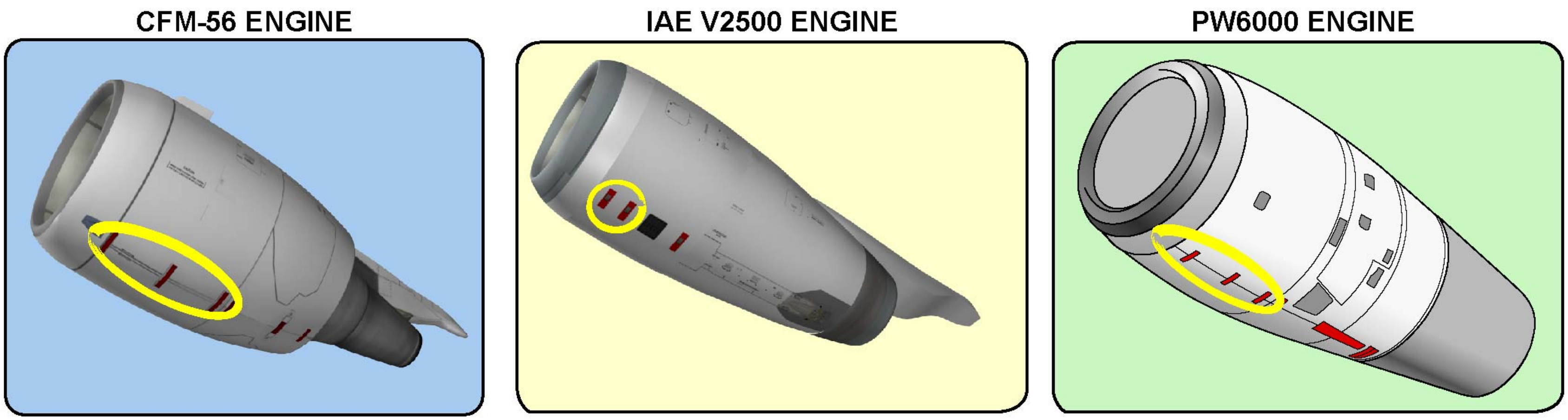
MAINTENANCE EXTERNAL VISIT (3)

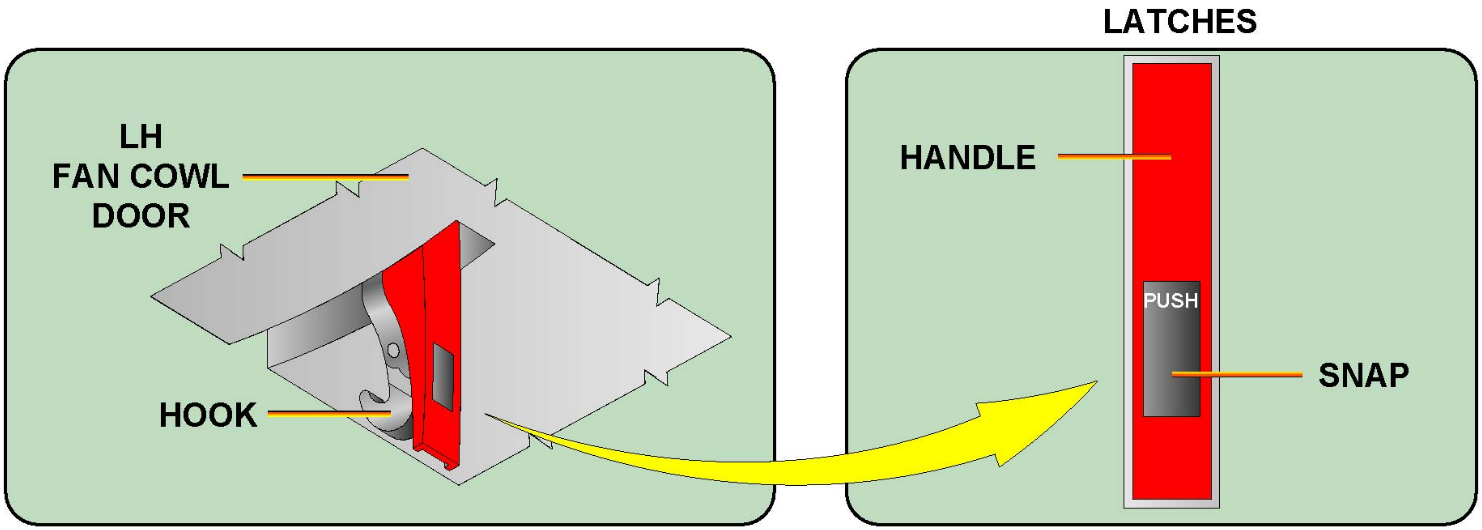
RIGHT AND LEFT ENGINE STATION (continued)

ENGINE FAN COWLS AND THRUST REVERSER COWLS

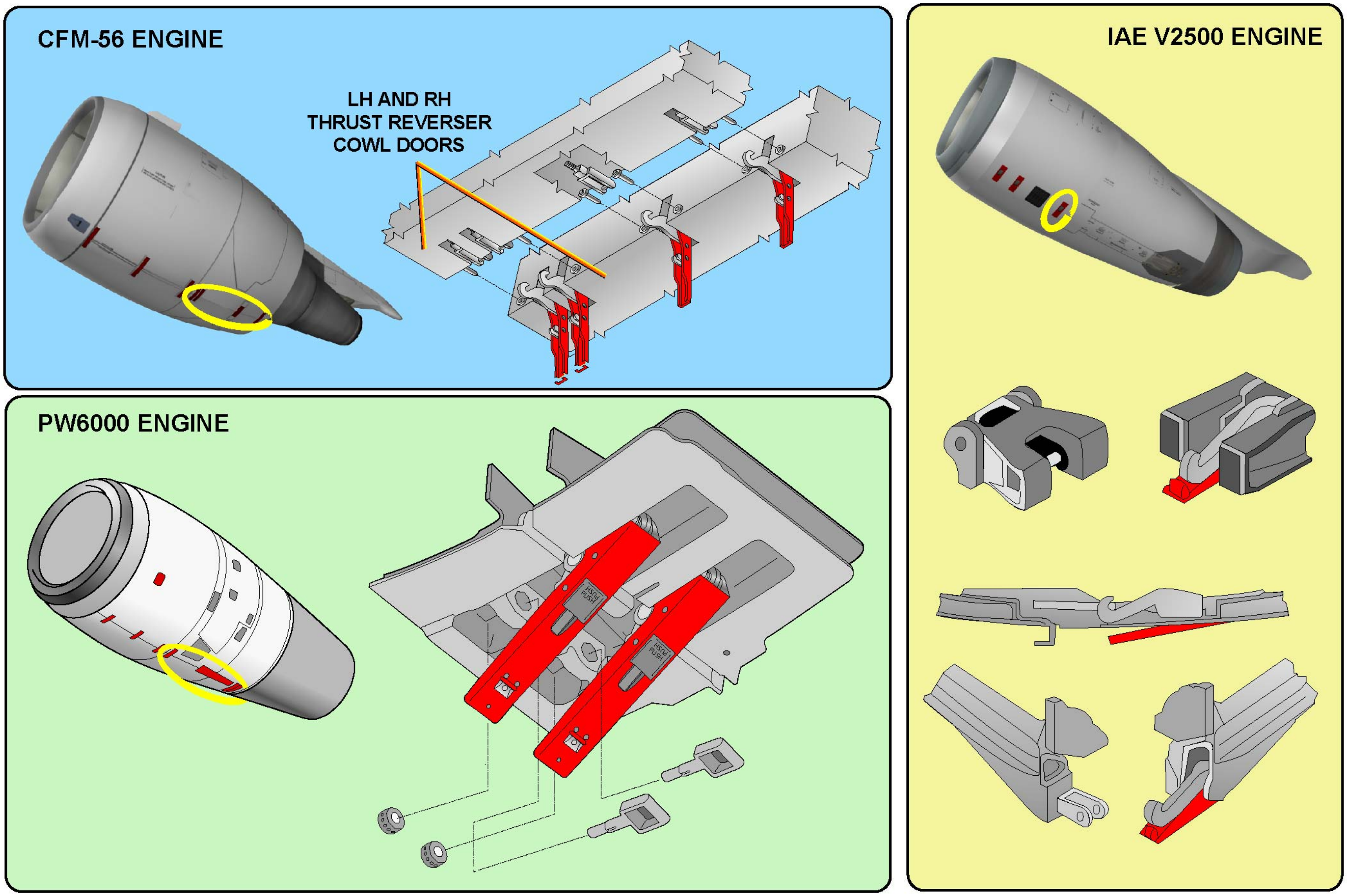
Check that the engine fan cowls are secured.
Check that the thrust reverser cowls are secured.

U7Z08431 - U2XT1T0 - UM01D4000000001





RIGHT AND LEFT ENGINE STATION - ENGINE FAN COWLS AND THRUST REVERSER COWLS



RIGHT AND LEFT ENGINE STATION - ENGINE FAN COWLS AND THRUST REVERSER COWLS

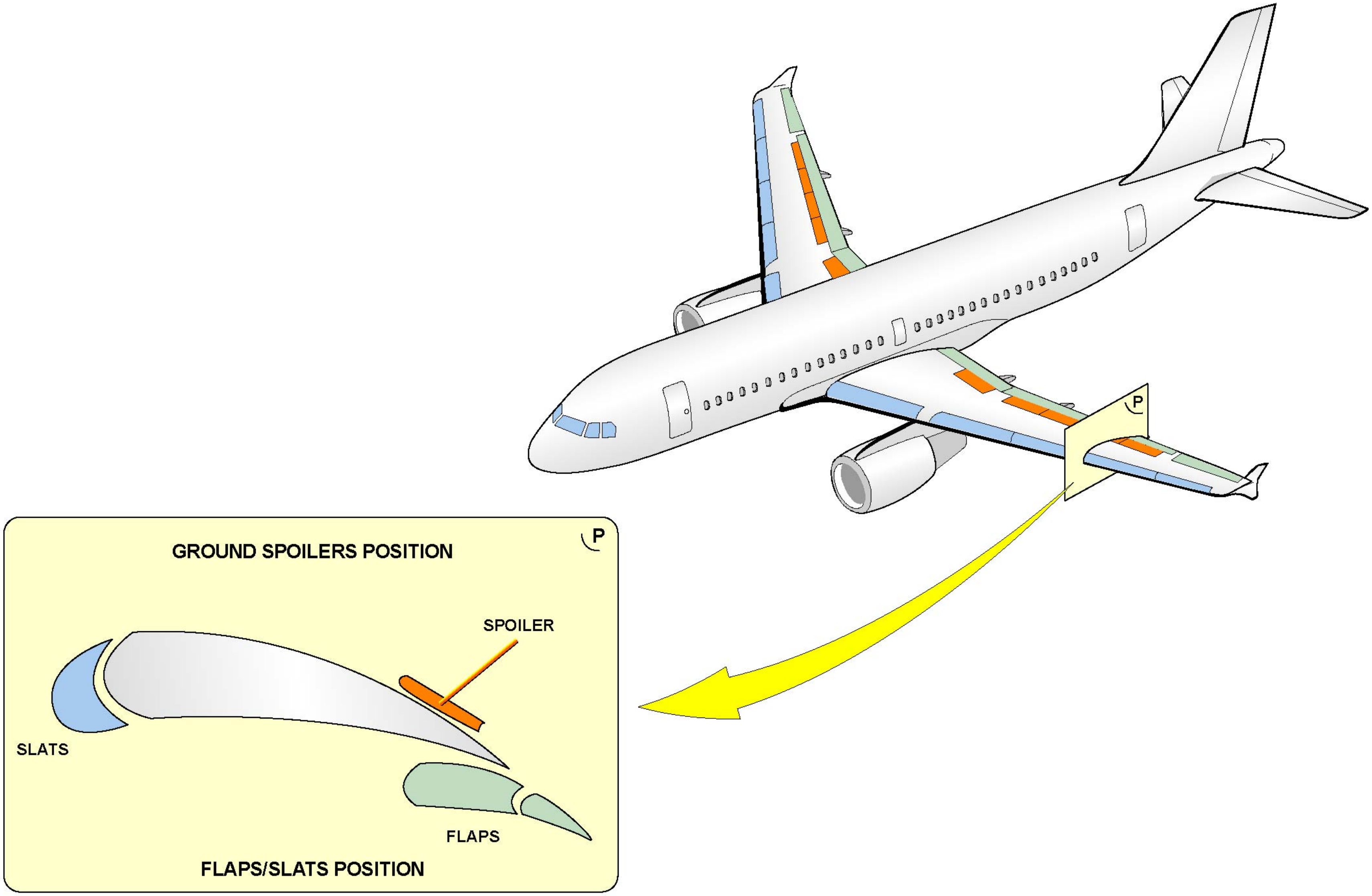
This Page Intentionally Left Blank

U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

RIGHT AND LEFT WING STATION

The R and L wing are the 4 and 5 stations. Confirm the position of the slats and then, the flaps. The spoilers must be retracted.



RIGHT AND LEFT WING STATION

U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

AIRCRAFT AREA

In the A/C area station 8, you have to make sure that the A/C area is clean and clear of tools, other items and FOD.

AIRCRAFT AREA

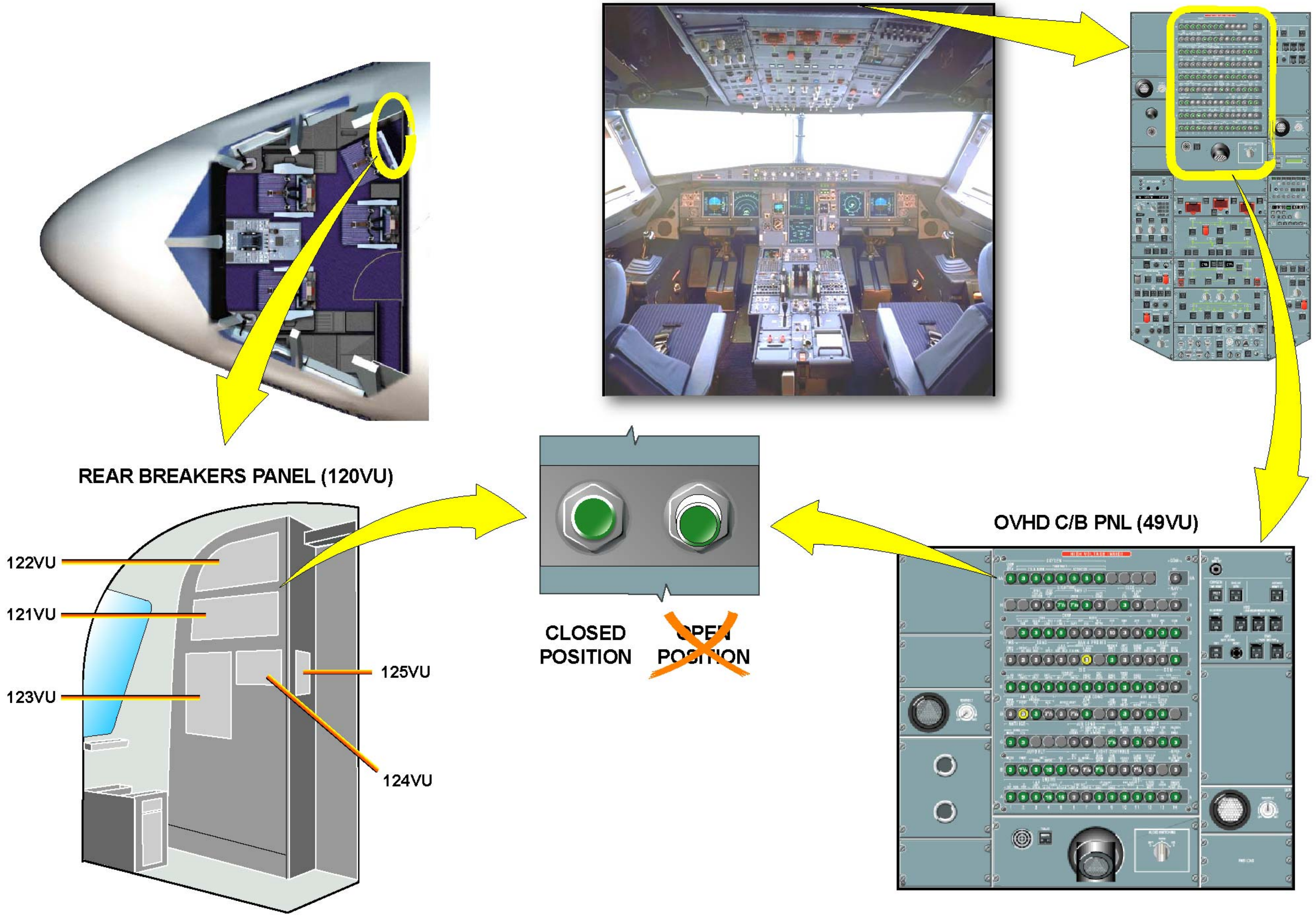
U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

COCKPIT STATION

REAR AND OVERHEAD C/B PANELS

Start by checking that the rear C/Bs and the overhead C/Bs are in closed position.



COCKPIT STATION - REAR AND OVERHEAD C/B PANELS

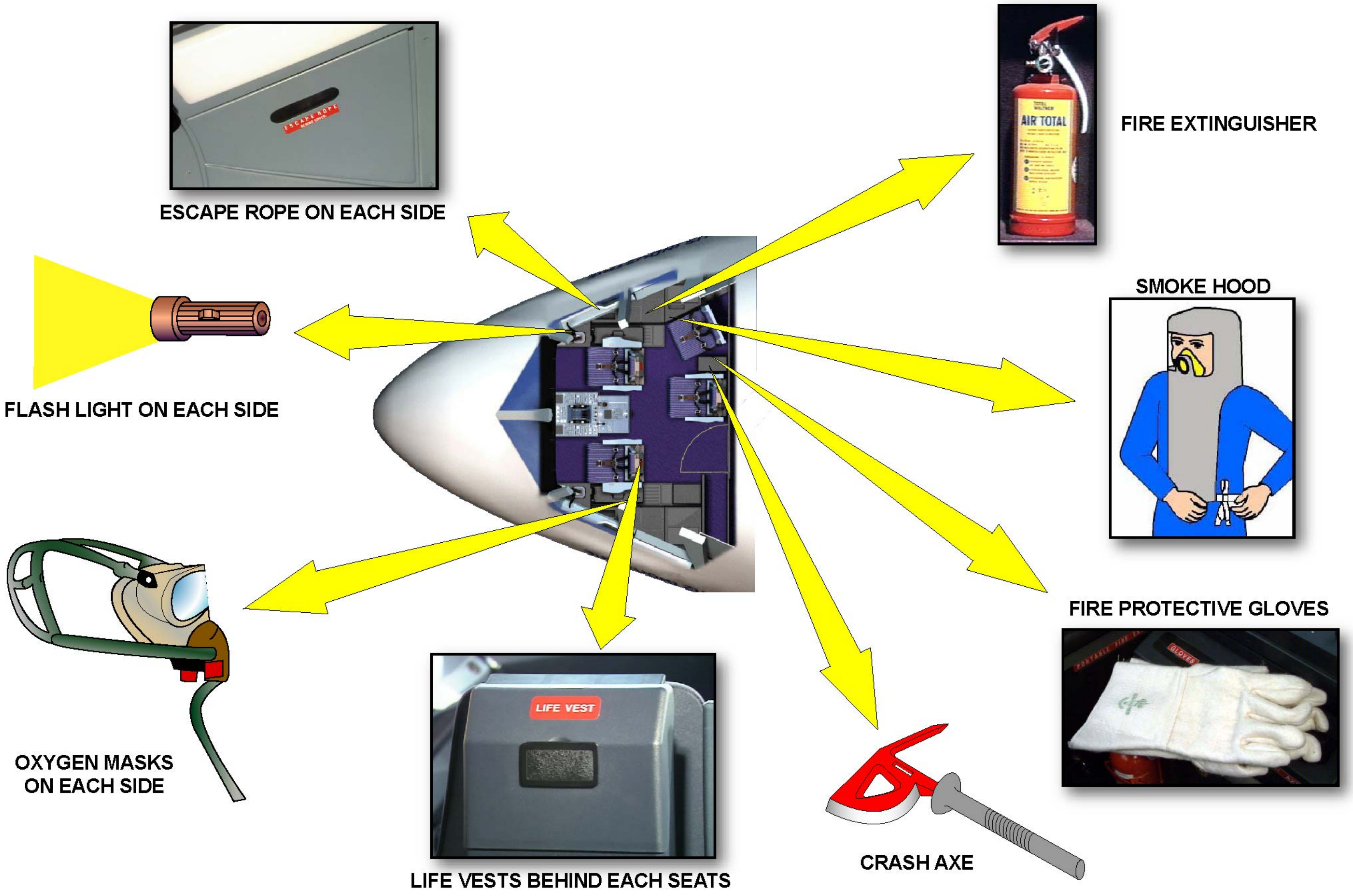
U7Z08431 - U2XT1TT0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

COCKPIT STATION (continued)

EMERGENCY EQUIPMENT

Then, have a look the emergency equipment. This consists in verifying that the escape ropes are present, observing that the fire extinguisher is in position, making sure that the cockpit is equipped with smoke hoods, checking that the fire protective gloves are present, ensuring that the crash axe is in position, checking that the cockpit is equipped with life vests, verifying that the oxygen masks are present and observing that the flash lights are in position.



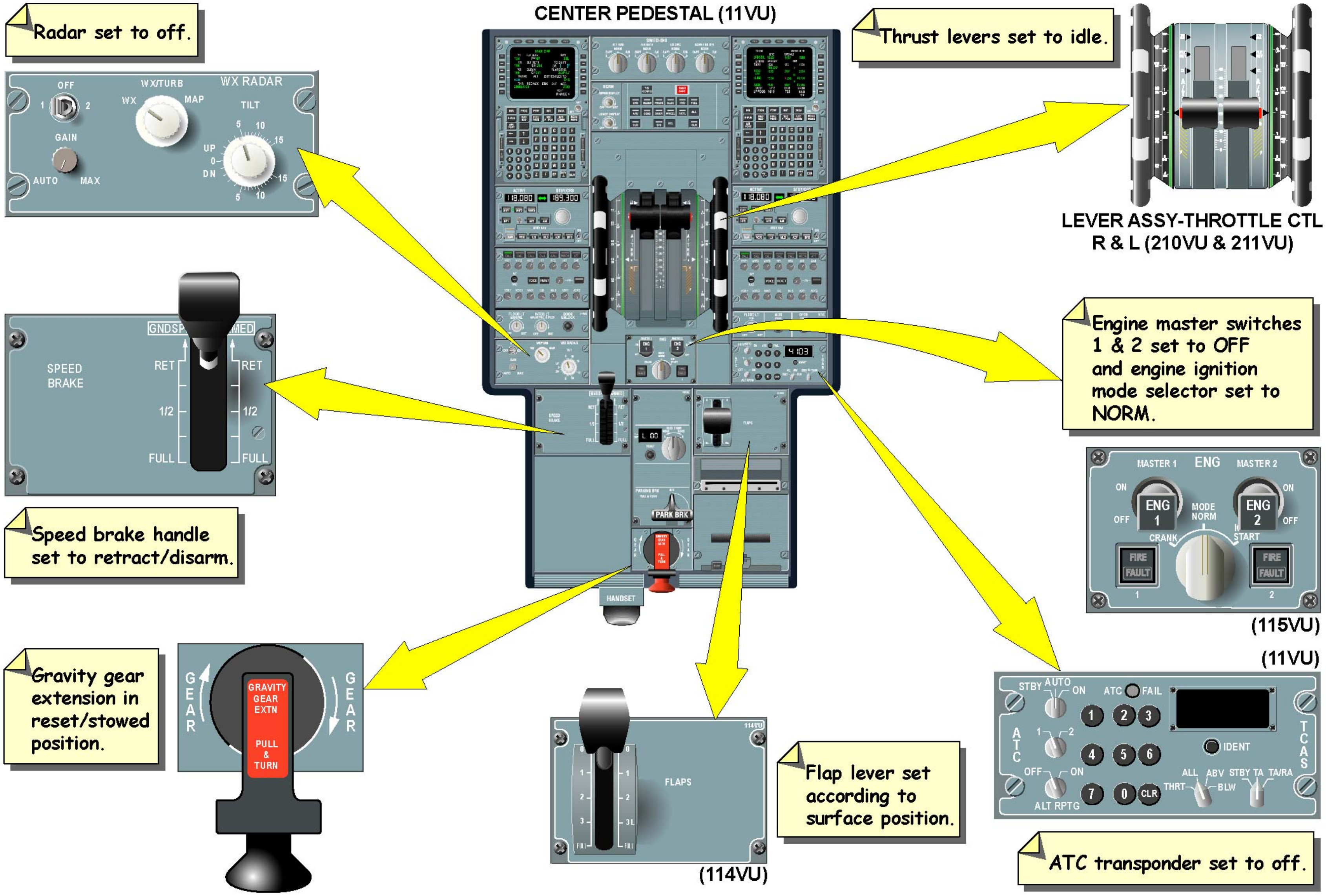
COCKPIT STATION - EMERGENCY EQUIPMENT

MAINTENANCE EXTERNAL VISIT (3)

COCKPIT STATION (continued)

PEDESTAL PANEL CHECK LIST

On the center pedestal, verify that the speed brake handle is in the retract/disarm position. If the speed brake handle disagrees with the surface position, maintenance action is due. Make sure that the thrust levers are in the IDLE position.
ENG MASTER SWs 1 and 2 must be in the OFF position and the engine ignition mode selector in the NORMal position.
Observe that the flap handle is set according to surface position.
If engine reverser cowls have to be opened for maintenance action, the slats must be retracted.
Check that the radar is off. Also, verify that the Air Traffic Control (ATC) transponder is off.
Make sure that the gravity gear extension handle is in the reset and stowed position.



COCKPIT STATION - PEDESTAL PANEL CHECK LIST

U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

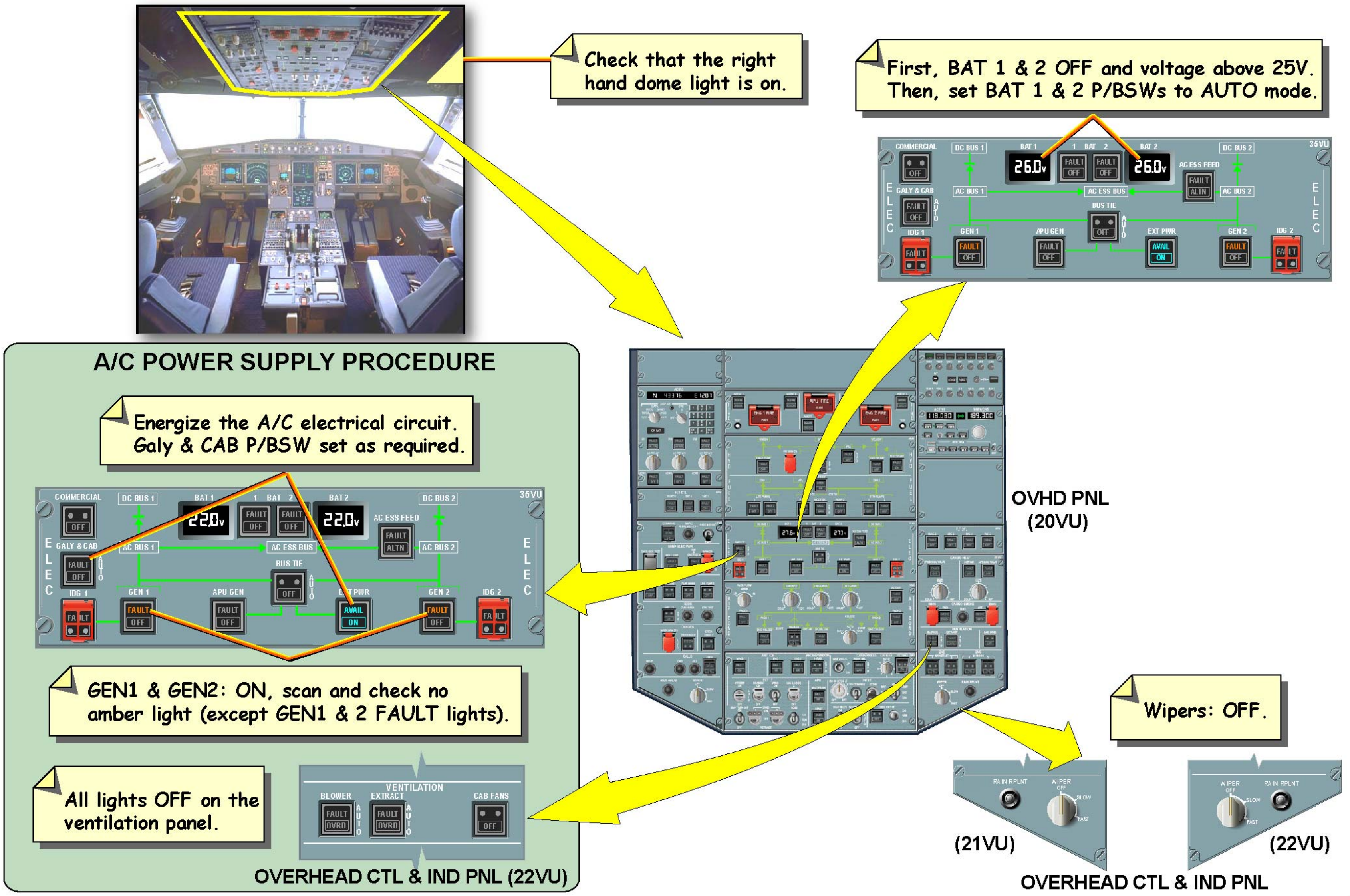
COCKPIT STATION (continued)

OVERHEAD PANEL CHECK LIST AND A/C POWER SUPPLY

You must then make sure that the wipers are off. BATteries 1 & 2 P/BSWs must be OFF and the voltage should be about 25 volts.
Proceed by setting the BAT 1 P/BSW to AUTO position. Then, set the BAT 2 P/BSW to AUTO position.

NOTE: Note: if BAT voltage is below 25V, a charging cycle of 20 minutes is required.

Check that the right hand dome light is on.
A/C power supply procedure:
On the overhead panel, set the EXTernal PoWeR P/BSW to ON. Also, set the GEN 1 P/BSW to ON and the GEN 2 P/BSW to ON.
Scan and check that no amber lights are on except GENerator (GEN) 1 and GEN 2 FAULT lights on panel 35VU.
The GALY & CAB P/BSW should be as required. Finally, verify there is no light on the ventilation panel.
The A/C is now ready to maintenance.



COCKPIT STATION - OVERHEAD PANEL CHECK LIST AND A/C POWER SUPPLY

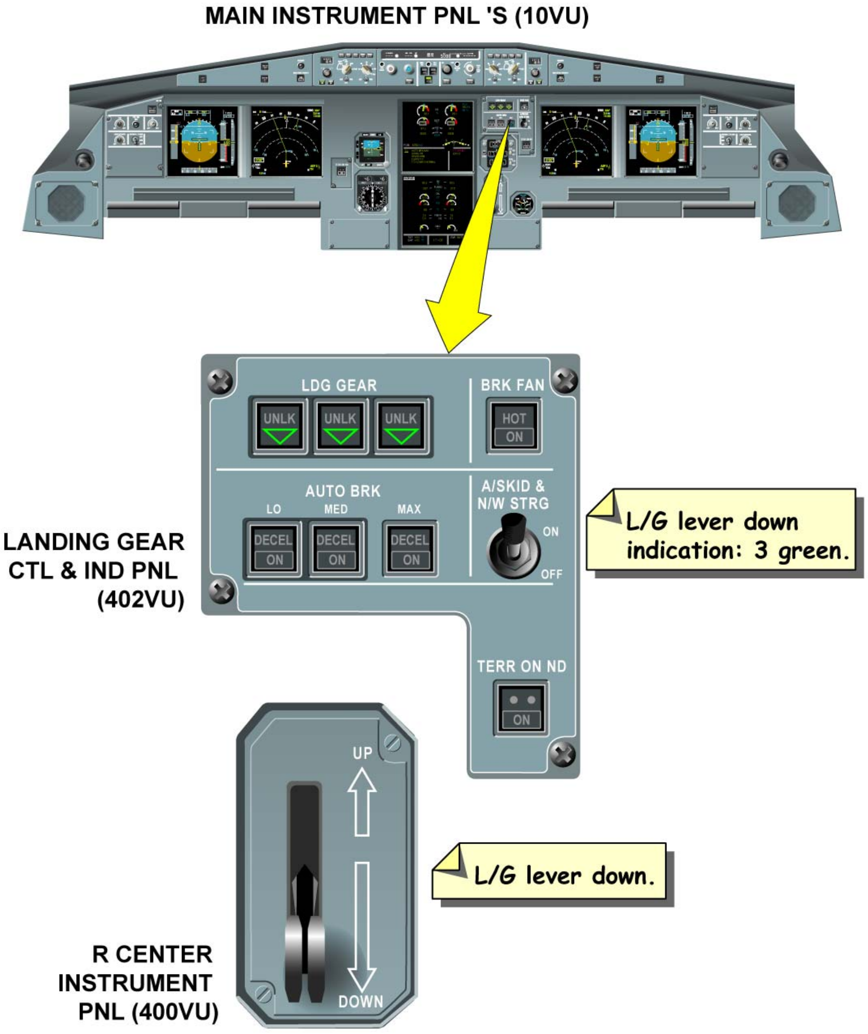
U7Z08431 - U2XT1T0 - UM01D4000000001

MAINTENANCE EXTERNAL VISIT (3)

COCKPIT STATION (continued)

MAIN INSTRUMENT PANEL CHECK LIST AND CONTROLS SAFETY CHECK LIST COMPLETED

On the instrument panel, make sure that the L/G lever is in the down position and confirm that the three green arrows on the L/G panel are on. The control safety CL should now have been accomplished.



Controls safety CL: completed.

CONTROLS SAFETY CHECK LIST

AIRCRAFT SYSTEMS POWERING

BAT Pushbuttons .... OFF / voltage above 25.5V
BAT Pushbuttons .... AUTO / ON
EXT Power .... ON
Gen 1 and 2 .... ON
Scan and check no amber lights (except GEN 1 and 2 fault lights)
VENT PANEL .... CHECK NO LIGHTS
ADIRS .... SET NAV
ECAM .... ON
EFIS .... ON
ANNUNCIATOR LIGHT TEST .... PERFORM

LEAVING THE AIRCRAFT

ADIRS .... OFF
PTU .... AUTO
FUEL PUMPS .... OFF
A/SKID NOSE WHEEL .... ON
ECAM, EFIS display .... OFF
EXTERNAL POWER .... OFF
BATTERIES .... OFF

COCKPIT STATION - MAIN INSTRUMENT PANEL CHECK LIST AND CONTROLS SAFETY CHECK LIST COMPLETED

AIRBUS S.A.S.
31707 BLAGNAC cedex, FRANCE
STM
REFERENCE U7Z08431
OCTOBER 2008
PRINTED IN FRANCE
AIRBUS S.A.S. 2008
ALL RIGHTS RESERVED

AN EADS COMPANY